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Reverse transfer students : characteristics, motivations, and implications.

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REVERSE TRANSFER STUDENTS: CHARACTERISTICS, MOTIVATIONS, AND IMPLICATIONS

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DEDICATION

This dissertation is dedicated to my husband,

Ferrell C Lowrey, III,

And my son,

Galen Ferrell Lowrey.

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ABSTRACT
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Kathryn E. Lowrey

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The reverse transfer literature contains studies investigating the demographic characteristics of postsecondary students that attended a community college after attending a four-year institution, and their proportion in the community college student population. A few researchers have investigated reverse transfer student motives for enrolling in the two-year college. However, the literature is lacking studies exploring the intentions of reverse transfer students to complete their programs of study at the community college, and how these intentions impact retention and completion measures of effectiveness at the community college. The purpose of this study was to examine reverse transfer student demographic characteristics, education background, and motivations for participating in reverse transfer behavior to predict program completion at the community college.

The research design of this study used a survey administered to 860 students in classes in two community college districts. Data were analyzed using correlations and hierarchical regression analyses. The findings demonstrated that reverse transfer students in the study group bore substantial differences to reverse transfer students reported in earlier national literature. The only statistically significant predictive variables for

program completion identified were gender and marital status: married students and female students were more likely to indicate that they intend to complete their programs of study than other reverse transfer students.

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INTRODUCTION

The term "reverse transfer" refers to educational movement in a direction contrary to the traditional transfer from community college to a four-year institution. According to national statistics (McCormick, 2003), 27% of baccalaureate graduates who began in public four-year institutions, and 24% of those who began in private four-year institutions, enrolled in community colleges at some time before they completed a degree. Various researchers place the proportion of reverse transfer students in community colleges at 9% (Heinze & Daniels, 1971) to 27% (McCormick, 2003) of the entire student body, yet little research exists of the motives behind reverse transfer behavior or the resulting consequences for community colleges. Early researchers (Kuznik, 1972; Lee, 1975; Meadows & Ingle, 1968) assumed that students engaged in reverse transfer behavior because of academic difficulty at the four-year institution. More recent studies (Catanzaro, 1999; Kajstura & Keim, 1992; Lambert, 1993; Quinley & Quinley, 1999; Townsend & Dever, 1999; Vaala, 1990) found that, while approximately 35% of students reverse transferred for reasons related to poor academic performance in early studies (Fischer, Kellerman, & Odom, 1975; Kuznik, Maxey, & Anderson, 1974), many chose to attend the community college for a variety of other reasons. As community colleges, the workplace, and the general population have changed over time, so have the reasons for reverse transfer behavior.

The profile of the traditional student (Pascarella & Terenzini, 1998) provides the basis for most education policy. Increasingly, however, students attend two to as many as eight colleges during their undergraduate careers (Adelman, 1999). Agreements between community colleges and four-year institutions assume a linear progression from associate to bachelor's degree in existing programs (LaPez, 2005). The number of students following the traditional path is dwindling, with students attending part-time, taking time off, and transferring with greater frequency (McCormick, 2003). The widespread practice of multiple institutional attendance, coupled with increasing numbers of education providers, means that institutions not only need to understand the various patterns of student attendance, but also need to develop more sophisticated systems of tracking student educational progression and more extensive and flexible interinstitutional agreements. These patterns also indicate that current measures of student success, progress, and institutional effectiveness may be outdated and do not reflect actual student attainment of goals (Burd, 2006; LaPez, 2005; Phelan, 1999). In light of increased recent demands for measurable outcomes, emphasis on retention and completion, and the strengthening ties of the shrinking pool of government funds to these measures, community colleges find themselves in a very difficult position. They have to demonstrate institutional effectiveness and accomplishment of state education goals to continue to receive government funds (Governor's Commission on Higher Education in the Metropolitan Area, 1990; Kentucky Postsecondary Education, 1997; U.S. Department of Education, 2007). At the same time, an increasing portion of the student population attends part-time, takes longer to obtain a credential, may not intend to obtain a credential, attends only to fill specific slots on the path to their goal, and may take

extended periods of time off (Adelman, 1999a; Grosset, 1992; U.S. Department of Education, 2001).

The attendance patterns and goals of approximately one-fifth to one-quarter of the student population in an educational institution could significantly influence government funding levels, enrollment policies, and program curricula (Phelan, 1999). Community college administrators, state legislators, and federal accrediting agencies must understand the behaviors of all groups of postsecondary students to best plan and develop programs that meet the needs of students, meet the goals of the college, and satisfy the educational goals of the state (Nespoli & Martorana, 1983; Phelan, 1999).

Questions regarding which groups have priority for products and services, which should be selected for admission to certain programs, and how "student" should be defined, are more than intellectual and philosophical exercises. Public funding is dependent upon institutions exhibiting acceptable retention and completion statistics to government bodies (Governor's Commission on Higher Education in the Metropolitan Area, 1990; Kentucky Postsecondary Education, 1997; U.S. Department of Education, 2007). Institutions have to prove they provide services of value to the community and to society. Policy makers tend to focus on indicators that are easily quantified and measured because they produce tangible statistics that can be easily compared. As public funding becomes more restricted, and colleges must demonstrate greater accountability, institutions focus more attention on the types of students that can generate the best statistics possible. As competition for government dollars becomes more aggressive, institutions look for ways of predicting the students that will produce the best indicators of progress, and where retention efforts should be focused. The questions then become:

How do reverse transfer students fit into this equation? Why do reverse transfer students reverse transfer? and Do they intend to complete the programs they start?

Background

Community college faculty and administrators have known of the existence of students who attended four-year institutions in the community college student population for decades. Clark (1960) was the first to formally examine the reverse transfer (reverse articulation) phenomenon. Since then, studies have examined reverse transfer students in the context of community colleges nationwide (Heinze & Daniels, 1971; Hudak, 1983; Rodrigues, 1991), in state systems (Harris, 1997; Hillman, Lum, & Hossler, 2008; Hogan, 1986; Kuznik, 1972; Lambert, 1993; Winter & Harris, 1999; Winter, Harris, & Ziegler, 2001), in districts (Baratta, 1992; de los Santos & Wright, 1990; Lee, 1975; Mitchell & Grafton, 1985), and within single institutions (Kirby, 1977; Meadows & Ingle, 1968; Pope, Turner, & Barker, 2001; Quinley & Quinley, 1998a; Rooth, 1979; R. Ross, 1982).

Much of the existing literature on student characteristics and educational needs focuses on traditional and nontraditional students. Traditional students are defined as students who entered a postsecondary institution, often a community college, immediately after high school graduation. They attended college full-time and, if they worked at all, they worked only part-time. If the student attended a community college, he or she graduated with an associate degree and transferred to a four-year institution to complete a bachelor's degree (Piland, 1995).

The definition of nontraditional student is far from consistent. Many government documents (Choy, 2002) refer to the definitions by Bean and Metzner (1985) and Horn and Carroll (1996). Bean and Metzner (1985) defined nontraditional students as

> Older than 24, or does not live in a campus residence (e.g., is a commuter), or is a part-time student, or some combination of these three factors; is not greatly influenced by the social environment of the institution; and is chiefly concerned with the institution's academic offerings (especially courses, certification and degrees). (p.489)

Horn and Carroll (1996) delineated seven specific determining characteristics of nontraditional students, possession of any one of which classified students as nontraditional. The number of characteristics a student possessed classified him or her as minimally, moderately, or highly nontraditional. The determining characteristics were:

- over the age of 24;
- attend college part-time;
- work full-time;
- independent;
- have dependents;
- single parent; and
- possess a GED or high school completion certificate.

Because reverse transfer students were able to gain entry to a four-year institution, often beginning their postsecondary careers there, they typically do not possess a GED completion certificate. Often, however, they possess all or most of the other characteristics, making them highly nontraditional according to these criteria. The common criteria in these definitions and most others are over the age of 24 and/or attending school part-time.

Reverse transfer students are a subgroup of nontraditional students with special characteristics and needs. This subgroup can be further divided into completer and noncompleter reverse transfer students. Completer reverse transfer students have completed a four-year degree or higher before entering the community college. Noncompleter reverse transfer students attended a four-year postsecondary institution, but they entered the community college before they completed a four-year degree. By definition, the reverse transfer phenomenon is unique to two-year colleges, usually community and technical colleges. To fully understand reverse transfer students and what their presence means to community colleges, one must first examine the changes that have taken place in postsecondary institutions and in the general population over the last 40 years.

The education products of community colleges include vocational-technical training, continuing education, remedial education, community service, and preparation for transfer to a four-year institution (Cohen & Brawer, 2003). Since the late 1960s and early 1970s, societal changes necessitated intensive self-examination with respect to mission, constituencies, and priorities (Lambert, 1993). Today's community colleges grew out of those societal changes.

In the 1980s, despite the shrinking pool of 18-year-olds in the general population, overall community college enrollment continued to increase at substantial rates. Community colleges developed and expanded programs to attract older students. The community colleges also made part-time enrollment easier for older, working (non-traditional) students and women (Cohen & Brawer, 2003)

The significance of the reverse transfer phenomenon as a topic of investigation comes from the increasing numbers of nontraditional students enrolled in postsecondary institutions and the different demands and benefits they bring. Obtaining an accurate picture of nontraditional students, specifically reverse transfer students, is difficult because researchers and institutions do not use consistent definitions of these categories, measure indicators in a consistent manner, or use consistent terminology. Changes in accountability requirements by accrediting agencies and the government also influence the types and detail of data collected on each student over time.

In examining the literature, the research aggregated around several issues. The following subsections explore these issues, the consequences to the students, and how they impact institutions.

Attendance patterns.

When examining nontraditional students, complex attendance patterns are widespread. Common characteristics of nontraditional students are part-time enrollment, delayed enrollment, multiple institution attendance, stop-out behavior (temporary enrollment disruption), and educational goals that do not coincide with formal programs of study.

Perhaps one explanation for the complex patterns of attendance of community college students is the perception of a

> ... clear-cut, three-tier curriculum structure: academic education for those preparing for transfer to baccalaureate-granting institutions; vocational training for those seeking employment or occupational skills upgrading; and noncredit

adult and continuing education for area citizens with ad hoc educational needs that can be met without earning a credential. (Palmer, 1990, p. 21)

In reality, the curricular tracks are not clear-cut, and many programs at the community college and the four-year institution contain both vocational and academic elements. There also exists a loose association between the official objectives of the curriculum and the educational goals of the students. A survey conducted by Riley (1984) revealed that 26% of students in vocational programs enrolled with the intention of transferring, and 8% enrolled for personal interest. Almost 25% of students in liberal arts programs enrolled for job-related reasons. Less than 10% of all community college students enroll with the intention of earning an associate degree, either to transfer or as a terminal credential (Palmer, 1990).

Adelman (1989) examined the transcripts of students in the Department of Education National Longitudinal Study of the High School Class of 1972. The attendance patterns he observed suggested that they were student-driven instead of curriculum-driven. There was a progression from work in basic skills, through introductory courses, to specialized courses in the desired discipline. Often courses were taken over extended periods of time and taken "to bridge the gap from one life stage to another, or to test their aptitude for further college study." (Palmer, 1990, p. 23)

Grosset (1992) compared the enrollment behaviors of 1982 and 1990 associate degree recipients at a large urban community college for the purpose of understanding the factors that influence stop-out behavior. Because community college students often play many simultaneous roles in their lives, earlier researchers suggested outside

commitments as reasons for nonpersistence behavior (Metzner & Bean, 1987; Tinto, 1987), which may be temporary or permanent.

In Grosset's (1992) study, close to one third of graduating students attended another postsecondary institution before enrolling in the graduating college. The study indicated that stop-out behavior increased from 30.0% in the 1982 graduating group to 42.2% in the 1990 graduating group. The number of students who took more than six years to earn an associate's degree increased from 7.7% in 1982 to 30.3% in 1990, with a decrease in the number of credits earned per semester attended. There was also an increase in changes of academic program. Outside commitments and demographic characteristics other than age did not predict stop-out behavior.

Bonham and Luckie (1993b) conducted a study to discover the reasons for stop-out behavior in students from a community college. The researchers expected the majority of the 399 respondents would be dropouts (discontinuing enrollment with no intention of returning), but only 11 respondents indicated no plan to return to school. Thirty percent accomplished educational goals without graduating (opt-outs), more than half originally intended to complete a program of study, 23% intended to complete courses to transfer, and 25% intended to take only as many courses as seemed interesting or doing something different from the goals identified. In contrast to Grosset's (1992) study, comments given during the study by Bonham and Luckie (1993b) indicated that work-related problems played a major role in the student's inability to stay in school. Childcare was also mentioned as a pervasive problem of concern.

The differences in the findings of the above studies indicate that more research is needed to uncover the reasons behind conflicting results. A study using national data and consistent definitions and data analysis might alleviate some of the discrepancies.

Tracking progress.

Reverse transfer students attend more than one institution over their college career, and often they attend several (Adelman, 1994). Because of this, the transfer of credits and institutional tracking of student progress is important to student success. Bureaucratic mechanisms exist to contend with the formal transfer of course credits from one institution to another, but with the increasing frequency of transfer to and from four-year institutions, and concurrent enrollment at multiple institutions, there is a need to better understand the educational and administrative implications of multiple transfer behavior.

Adelman (1999a) found that the proportion of bachelor degree recipients who attended more than one institution rose from about half in 1972 to nearly 60% in 1982. Most of the increase was due to a dramatic rise in the number of students who attended three or more institutions (13% to 22%). About half of those who attended at least three institutions returned to their first school.

McCormick (2003) found differences between students who formally transferred and those who took classes at other institutions, but did not transfer. Students who attended multiple institutions, but did not formally transfer, performed comparably to their counterparts who did not attend multiple schools. Among students who attended multiple institutions but did not transfer, persistence to a bachelor's degree was higher than among students who attended only one institution (85% versus 76%). Only about half of the students who formally transferred persisted to receive a bachelor's degree.

Adelman (2006), however, found that multiple institution attendance without transfer decreased the likelihood that a student would complete a bachelor's degree. He also found that continuous enrollment, even if it is part-time, increased the likelihood of degree completion.

Baccalaureate & Beyond: 2000/01 (U.S. Department of Education, 2001) data indicated that multiple institution attendance was associated with slowed progress toward degree or certificate completion. Co-enrollment also increased the time to obtain a degree. Reverse transfer students were less likely to persist for six years or to graduate than those who never attended a community college. As seen in other studies, the latter might be due to educational goals that did not include formal credentials. The increase in time to credential of multiple transfer students could indicate setbacks due to nontransferability of credits, as well as reassessment of goals or realignment of aptitudes and program of study (Catanzaro, 1999; Meadows & Ingle, 1968; Kearney, Townsend, & Kearney, 1995; Kuznik, 1972).

Effectiveness measures.

Graduation rates and the number of credentials awarded are the measures used to determine funding levels from the state (Phelan, 1999). LaPez (2005) examined the effectiveness of measurement policies with regard to graduation rates and transfer students. The patterns of student mobility demonstrated that the higher education system in the United States works well to provide access to students, and to help students meet their educational goals. The methods used to measure institutional effects, however, focus on traditional full-time freshmen beginning college in the fall following high school graduation, attending the same institution throughout their career, and graduating from

the same institution at which they began. For many institutions, these students are now a minority. Instead of the traditional linear path, LaPez refers to a "multiple-lane highway with connecting access roads and side streets." This approach promotes access by providing multiple points of entry and a broader range of educational options. The patterns of attendance reveal major improvements in access to higher education and present new challenges for institutions and education systems in tracking student progress and demonstrating institutional effectiveness.

With the increasing mobility of students within state higher education systems, and to higher education systems in other states, it becomes important to track student educational progress on a national basis. Noncompleter reverse transfers, by definition, transfer at least twice on their way to obtaining a bachelor's degree. Their enrollment potentially influences effectiveness measures at three institutions. Institutions know that data on student retention at the institution level is incomplete and probably inaccurate. Current state student-level databases do not reflect student movements to other institutions, especially to institutions out of state or to private institutions. They simply indicate that the students did not return to complete their programs. Institutions have no way to know the extent of the inaccuracies in their data (Ewell, Schild, & Paulson, 2003).

Since the 1980s, postsecondary institutions have felt increasing pressure to demonstrate accountability to the government and to the public in the form of graduation rates (Pascarella & Terenzini, 1998). While examination of college transcripts shows that bachelor's-degree attainment has remained stable over the past three decades, transfer rates have dramatically increased. Federal rules allow a student to be counted in the graduation rate of a school only if that student attended that institution during their entire

pursuit of the bachelor's degree (Adelman & Burd, 2004; LaPez, 2005). The use of the community college in the progression to a degree may be convenient and cost-effective for students, but it often prevents both institutions from using those students in their primary effectiveness measure, graduation rate (Burd, 2004).

The community college mission of preparing students for transfer to a four-year institution is also influenced by students' changing attendance patterns. Traditional community college attendance models have students completing an associate of arts or associate of science degree, which is then transferred to a four-year institution as the first two years of a four-year degree. In addition to graduation rates, transfer rates are a major effectiveness measure for community colleges. Attendance patterns that include transfer to and from other institutions, both two-year and four-year, and transfer without obtaining an associate's degree support claims that the transfer mission is in jeopardy (Alfred & Peterson, 1990). The increasing numbers of students who transfer after completing an associate of applied science rarely count in transfer rates because the associate of applied science is intended to be a terminal degree. This lends credence to the argument that there needs to be a new definition of transfer that accounts for current transfer patterns.

State higher education reforms (Governor's Commission on Higher Education in the Metropolitan Area, 1990; Kentucky Postsecondary Education, 1997) focus on P-16 education, "seamless" education, and facilitated movement among state higher education institutions. This is helpful to students by increasing access and flexibility, but serves to decrease effectiveness measures. Using only credentials awarded and transfer rates fails to acknowledge the other functions of the community college in workforce development, continuing education, and skills upgrade.

Ewell et al. (2003) examined the feasibility of a nation-wide student-level database. At the time of the study, data on student retention and program completion were self-reported by the institutions, so inconsistencies limited tracking of a student beyond the current institution. State-level student-level databases were helpful because they allowed tracking within the state. However, 40% of students who changed institutions did so across state lines. Thirty-nine states maintained 46 student-level databases. These databases covered 69% of the nation's full-time students and 73% of all students.

All of the 46 databases could consistently track students on five core elements: demographics, academic background, enrollment status, academic activity, and academic attainment. About half of the states linked their student-level databases with other state-level databases; however, there was little linking of databases across state lines. Most student-level databases contained information only on public institutions within the state. Twelve of the 46 contained information on some private institutions, two of which covered all private institutions in the state. None contained information on proprietary institutions and few contained information on tribal colleges. No mention was made of the inclusion or omission of military training. There existed inconsistencies in policies related to the sharing of information between state systems because of privacy issues. As students become more mobile, a national student-level database is necessary to track student educational progress (Ewell et al., 2003). With state and federal funding tied to institutional outcomes and effectiveness, demonstrating more accurate transfer activity can mean a broader funding base from state and local governments, as well as financial aid providers.

Environmental factors.

Increased life expectancy, higher education levels required in the workplace, and a rising retirement age combine to motivate older individuals to seek postsecondary education (Hooper & Traupmann, 1984). Their educational goals may or may not include obtaining a formal credential. Students who obtained credentials at four-year institutions may have no desire to complete another credential, but may look for personal enrichment or specific skills related to career enhancement. Voorhees and Zhou (2000) conducted a statewide study of student intentions. They found that a large proportion of students who enter community colleges do not intend to earn a degree or to transfer.

Sewell (1984) conducted a study to ascertain why adults return to school to seek a degree after time away from school. Approximately one-third of the participants indicated that job dissatisfaction, encouragement from family or friends, or the availability of funds were major triggers in their decision to enroll in college. Women ranked children entering school, and family or marital problems as important factors.

Family responsibilities and job related issues are linked for many women returning to college. MacKinnon-Slaney, Barber and Slaney (1988) examined the marital status of women as related to career aspirations and decisions. Divorced women, many of whom were first-time heads of household, had a critical need for increased earning power, which prompted them to return to school to obtain credentials quickly.

J. Ross (1988) explored developmental forces that influenced women's decisions to return to school. The decision to return to school was the result of complex interactions of internal and external forces in their lives. Most respondents viewed the return to school as part of a life reassessment process. The majority perceived their personal or career life

as being in transition. Spouses and family members played a central role in the decision to return to school as well as in the decision to leave in earlier attempts. Dissatisfaction with current work or career status also influenced many respondents to seek a change.

Carney-Crompton and Tan (2002) hypothesized that there are a variety of factors, including emotional and social support systems, which affect the nontraditional student's overall educational experience. They found that the age of dependent children might have been a significant influence on nontraditional women's school performance. Individuals who decided to return to school later in life may have possessed a higher sense of self-efficacy, motivation, and commitment to educational goals. They were also less likely to have young children at home.

Institutional considerations.

Two-year institutions face a number of new questions. Which groups have priority for products and services? If enrollment limits result in the rejection of some students, who shall they be? Who should decide on the policies regarding student selection and the types of students served? Should the definition of "student" rest on sequential attendance or could it reflect the actual attendance patterns that emerged in the past decade? How should colleges classify people who attend for reasons other than obtaining education credentials? How will the recent requirements for entry assessment and demands that students make continual progress toward completing a program affect enrollments of various groups? How will these requirements affect retention and program completion, and, therefore, government funding? Which groups receive the most benefit from institutions with "open door" attendance policies, and which do an institution with "open door" attendance policies impede? Which students should receive full financial

support? (Cohen & Brawer, 2003) Where institutional missions of workforce development and serving underserved and disadvantaged populations conflict, which should be given priority? What characteristics predict successful completion of a credential?

At present, some of these issues come into question only in situations where admission to individual programs is competitive or selective. In these instances, reverse transfer students have a marked advantage over first time college students. Many of the reverse transfer students entering allied health programs already hold degrees and have exhibited the ability to successfully complete college courses. From the college's standpoint, students with demonstrated academic ability are more likely to be successful in certain academic programs and count toward the school's completer numbers. Winter and Harris (1999) found that once reverse transfer students enrolled in a specific program, they were more likely to complete it than regular community college students. Because state legislatures allocate funds based on the number of credentials awarded, schools need to show the number of awarded credentials as high as possible (Lambert, 1993).

Community college missions set the goal of serving the entire community, and reverse transfer students are members of the community. Community colleges also have the mission of providing access to postsecondary education to all students, particularly disadvantaged and underserved populations. Reverse transfer students are often referred to as "academically advantaged" because they were able to secure entry into college in a competitive situation, have experience operating in the collegiate environment, and often they were academically successful at the four-year institution (Lambert, 1993). Enrolling

students with a history of university attendance boosts the perceived academic quality and prestige of the community college. Perceived high standards enables graduates to better compete for jobs and enables the community college to make a better case for government funding. Even more persuasive are numbers of university graduates who receive credentials from the community college. However, in selective admission situations at the community college, the disadvantaged and underserved populations are the students displaced by those students, often reverse transfers, which have demonstrated collegiate success. The ability to predict program completion by reverse transfer students can assist the community college to address the dilemma of conflicting missions and to rectify policy conflicts.

Business and industry interests look to community colleges to produce a well-prepared, skilled workforce (Nolte, 1992). State and local economies depend on a pool of highly skilled workers to attract large employers. While bachelor degrees are required for an increasing number of jobs, the applied training gained at the community college is also desirable in the workplace (Hillman et al., 2008).

> The contemporary economy, especially those sectors of manufacturing that thrive, requires a highly skilled labor force and one that is developing constantly through lifelong learning. The revolution in technology has brought about a need for a revolution in training requirements. This movement requires additional workplace skills. One of the reasons the nation's community colleges were formed was to train America's workforce. The colleges now must evolve to retrain that workforce. (Nolte, 1992, p. 7)

Even though workers may have degrees, changes in the workplace and in various industries require constant updating of skills and knowledge (Husain, 1999; Jones, 1996). Employers want employees that have demonstrated the initiative to keep up with changes in their environment (Irby, 1999). Reverse transfer students demonstrate drive to accomplish their goals, flexibility to manage diverse demands, and a commitment to do what it takes to complete a task.

Reverse transfer students exhibit tremendous diversity. Studies conducted at different times and at different geographical locations found demographic characteristics that were inconsistent (Brimm & Achilles, 1976; Hill-Brown, 1989; Hogan, 1986; Kajstura & Keim, 1992; Slark, 1982; Swedler, 1983). One characteristic, however, is consistent throughout all studies. Because reverse transfer students attended at least one other institution before enrolling in the community college, they tend to be older than the general community college population. Reverse transfer students present a number of issues to institutions ranging from multiple transfers among institutions, concurrent multiple institution attendance, extended periods of time to complete credentials, and attendance without the intention to complete credentials. Understanding the motivations behind reverse transfer behavior can help institutions and policy makers devise more effective methods of tracking student progression and measuring student goal attainment. The first step is to agree on consistent definitions and methods of calculating various student data. Acknowledging complex attendance patterns, which include not only multiple institutions, but also movement across state lines, is essential. Several researchers (Adelman, 2006; Ewell et al., 2003; McCormick, 2003; Welsh & Kjorlien, 2001) have called for the establishment of a national educational database to facilitate the

tracking of student progression, even when the student moves across state lines. This, in conjunction with the development of an extensive course equivalency database, would aid all postsecondary students, not just reverse transfer students, by minimizing the loss of credits during transfer. Examining the reasons for reverse transfer behaviors of all kinds, and documenting the extent of such behaviors, can help government officials, accrediting agencies, and postsecondary institutions develop funding formulae that more accurately reflect the services community colleges provide to community economic and workforce development.

Statement of the Problem

As explained in the previous sections, postsecondary institutions are experiencing budgetary reductions from both state and federal sources. Recent legislative actions have tied funding levels to demonstrated measures of institutional effectiveness. The effectiveness measures used as indicators of performance are number of credentials awarded, the number of students retained from one semester to the next, and other similar, quantifiable statistics (Governor's Commission on Higher Education in the Metropolitan Area, 1990; Kentucky Postsecondary Education, 1997; Phelan, 1999). Institutions are interested in showing large numbers of credentials awarded and in getting students through programs as quickly as possible to meet the goals set by the state and support the institution's case before the legislature to secure a greater share of available funds (Phelan, 1999). Even though workforce development and career training are important parts of the community college mission, if these activities do not translate into easily identifiable and quantifiable measures, they do not contribute to the overall demonstration of institutional effectiveness that justifies legislative expenditures.

Accomplishment of educational goals that do not coincide with established programs of study and attendance for personal enrichment also do not contribute to effectiveness measures, despite the recognized value of lifelong learning (Jones, 1996; Jongbloed, 2002).

The reverse transfer literature reveals that reverse transfer students have varied motives for attending the community college. By definition, they do not conform to the traditional postsecondary student model on which most legislation is based. Many, especially those who have completed a bachelor's degree, do not seek a credential, but attend to obtain specific skills or to fulfill specific desired educational goals that do not conform to standard institutional performance measures (Bach, Banks, Blanchard, Kinnick, Ricks, & Stoering, 1999). Their attendance patterns are often erratic and they can take extended periods of time to complete programs of study (Adelman, 1999a; McCormick, 2003). However, reverse transfer students are committed enough to their educational goals to pursue them, frequently enduring considerable inconvenience and sacrifice. With as much as 27% of the community college student population comprised of reverse transfer students, their intention to complete a credential and their attendance patterns can impact institutional funding acquisition and demands for student services.

Purpose of the Study

While much research exists on the characteristics and motivations of traditional students, and some also exists on nontraditional students, very little recent research has been conducted on the reverse transfer student population. The purpose of this study was to investigate demographic characteristics of reverse transfer students, the motivations for reverse transfer behavior, and the implications this behavior has with regard to program

completion. Previous studies of reverse transfer students (Brimm & Achilles, 1976; de los Santos & Wright, 1990; Harris, 1997; Heinze & Daniels, 1971; Hill-Brown, 1989; Hogan, 1986; Hudak, 1983; Kajstura & Keim, 1992; Kirby, 1977; Klepper, 1990; Lambert, 1993; LeBard, 1999; Lee, 1975; McCormick, 2003; Meadows & Ingle, 1968; Mitchell & Grafton, 1985; Phelan, 1999; Pope et al., 2001; Quinley & Quinley, 1998; Renkiewicz, Hirsch, & Drummond, 1982; Rodrigues, 1991; Rooth, 1979; Ross, 1982; Slark, 1982; Swedler, 1983; Townsend, 1999; Winter & Harris, 1999; Winter et al., 2001) identified a number of common characteristics to use as research variables to gain a more complete picture of reverse transfer students. Of particular interest in this study are the intention of reverse transfer students to complete credentials and what predictors of completion exist in the reverse transfer population.

Significance of the Study

Most models of transfer and retention are based on traditional attendance and transfer patterns (Pascarella & Terenzini, 1998). Reverse transfer students tend to switch from college to college, staying only as long as the college serves the student's purposes (Townsend, 1999). The Kentucky Postsecondary Education Improvement Act further facilitates this type of behavior, but it does not recognize or acknowledge resultant attendance patterns. Many institutions have a minimum required number of credits to be earned from their school to grant the completed credential. The mobile nature of reverse transfer students, combined with transfer policies, makes it difficult for any institution to include these students in their roles of completers. The more students move among institutions of higher education, the fewer credits they earn at each.

While many researchers have asked reverse transfer students why they left the four-year institution (Kuznik et al., 1974; Hagedorn & Castro, 1999; Hill-Brown, 1989; Kajstura & Keim, 1992; Mitchell & Grafton, 1985; Slark, 1982) and why they entered the community college (Bethune, 1977; Bigelow, 1982; Catanzaro, 1999; Drakulich & Karlen, 1980; Hagedorn & Castro, 1999; Hill-Brown, 1989; Hogan, 1986; Kajstura & Keim, 1992; Klepper, 1990; Quinley & Quinley, 2000; Rooth, 1979; R. Ross, 1982; Winter & Harris, 1999), none have analyzed student demographics and the given motivations to determine predictors of community college credential completion. Because completion rates are so important in the acquisition of funding, knowing the completion rates of reverse transfer students and the characteristics that predict completion can help institutions determine admissions policies, and program curricula. Knowing the reasons students transfer can also help institutions find ways of improving retention. If institutions can demonstrate improved retention and completion rates, they can justify requests for additional funding from the government.

Reverse transfer students have educational goals and attendance patterns that may not easily conform to the outcomes that decision and policy makers measure. Knowledge of the goals and patterns of this group can lead to more accurate measures of goal attainment and recognition of diverse attendance patterns. The determination of recognizable predictor characteristics for program completion can facilitate the adjustment of program policies and structures to better accommodate reverse transfer student goals, and result in the enhancement of institutional effectiveness measures.

Changes that influence the need for student services, administrative policies, and instructional accommodation are of concern to institution and system administrators. Of

equal concern are retention and completion statistics, and attendance patterns that influence funding levels. Study findings can assist community college administrators to: (a) determine if the population of reverse transfer students is a significant subgroup of the student population, (b) anticipate trends in student population composition, (c) highlight program structure and policies to accommodate reverse transfers, and (d) devise better measures for institutional effectiveness. The last item above should prove most valuable in strategic planning efforts and resource acquisition.

This line of research can also be extended to other areas of postsecondary education, such as adult education and e-learning, to better understand the motivations behind nontraditional student behavior.

Research Questions

The review of the literature regarding reverse transfer students provided the foundation for the following research questions:

1. What are the current demographic characteristics of reverse transfer students?
2. What are the current motivations for reverse transfer behavior?
3. After controlling for select demographic variables (gender, ethnicity, marital status, dependent children, age, and employment status), to what degree do motivations for reverse transfer behavior predict program completion at the community college?

Definitions

1. Applied transfer – transfer of credits from applied associate degree or technical programs to baccalaureate programs (Townsend, 2001a).

2. Articulated vertical transfer – traditional movement directly from a two-year institution's transfer program to a four-year institution (Rooth, 1979).
3. Completer lateral transfer students (CLT) – students who completed a program of study at one institution before transferring to another institution at the same level, i.e. four-year college to four-year college, or community college to community college (Mitchell & Grafton, 1985).
4. Completer reverse transfer (CRT) (Harris, 1997; Klepper, 1991; Mitchell & Grafton, 1985; Winter & Harris, 1999; Winter et al., 2001), or post baccalaureate reverse transfer (PBRT, PRT) – a reverse transfer student who possesses at least a baccalaureate degree.
5. Concurrent enrollment – four-year institution students who also enroll in two-year institution classes at the same time (Townsend, 2001b).
6. Credential – a certificate, diploma, or degree.
7. Double dipping – concurrent enrollment at two or more institutions (de los Santos & Wright, 1990).
8. Double reverse transfer – a reverse transfer student who has returned to a four-year institution (Rooth, 1979).
9. Dropout – a student that failed to accomplish their educational goal, did not return to school, did not graduate, and has no plan to return to school (Bonham & Luckie, 1993b).
10. Explorer – a student who enrolls in community college courses to explore new career possibilities (Quinley & Quinley, 2000).

11. First time students (FTS) – students attending college for the first time (Mitchell & Grafton, 1985).
12. Graduate – a student who has completed a credential or program of study.
13. Native student – a student who began his or her postsecondary education at the community college (G. Lee, 1975).
14. Noncompleter lateral transfer students (NCLT) – students who did not complete a program of study at one institution before transferring to another institution at the same level, i.e. four-year college to four-year college, or community college to community college (Mitchell & Grafton, 1985).
15. Noncompleter reverse transfer (NCRT) (Harris, 1997; Mitchell & Grafton, 1985; Winter & Harris, 1999; Winter et al., 2001), or undergraduate reverse transfer (URT) – a reverse transfer student who attended a baccalaureate-granting institution, but did not complete a baccalaureate degree or higher.
16. Nongraduate – a student who has not completed a credential or program of study.
17. Nontraditional student – students who fall outside the profile of a traditional student (an 18-year-old who enrolled full-time at a community college, completed the first two years toward a bachelor's degree, and transferred to a four-year institution to complete the bachelor's degree, all within four years) (Winter & Harris, 1999). A student who is "older than 24, or does not live in a campus residence (e.g., is a commuter), or is a part-time student, or some combination of these three factors; is not greatly influenced by the social environment of the institution; and is chiefly concerned with the institution's academic offerings (especially courses, certification, and degrees)" (Bean & Metzner, 1985, p.489). A

student who possesses any of the following criteria: over the age of 24; attends college part-time; works full-time; independent; has dependents; is a single parent, and; possesses a GED or high school completion certificate (Horn & Carroll, 1996).

18. Nontraditional transfer – movement of "students with unusual records, odd grades, from innovative programs or adults who have not attended college for some years" (Rooth, 1979).
19. Open-door transfer – lateral transfer from one two-year institution to another (Rooth, 1979).
20. Opt-out – a student who originally intended to take only a few classes and accomplished educational goals and discontinued enrollment without graduating (Bonham & Luckie, 1993b).
21. Persistence – continuing enrollment from one term to the next within a declared program of study (Adelman, 1999a).
22. Personal enrichment – taking courses at the community college without any linkage to a current or future career (Quinley & Quinley, 2000).
23. Post-baccalaureate reverse transfer students (PRTs) – two-year college students with baccalaureate degrees or higher (Lambert, 1993; Pope, Turner, & Barker, 2001).
24. Program of study – the major or credential the student has formally declared and in which the student is enrolled.
25. Re-entry – returning to any type of educational environment after a period of non-attendance. (Altmaier & McNabb, 1984)

26. Re-entry students – students that are 25 years old or older, and have been out of school for some years (Klein, 1990)
27. Reverse transfer (RT) – the educational attendance pattern of attending a four-year institution before attending a two-year institution (Quinley & Quinley, 1998, Slark, 1982), or; a student enrolled in a community or technical college who attended a baccalaureate-granting institution (Townsend, 2001a).
28. Simultaneous enrollment - four-year institution students who also enroll in two-year institution classes at the same time (Townsend, 2001a).
29. Stop-out – a student with temporary enrollment disruption of a semester or more (Bonham & Luckie, 1993b).
30. Summer sessioners – students who are enrolled in four-year institutions during the regular school year, but take classes at the two-year institution during the summer (Hagadorn & Castro, 1999; Townsend, 2001a).
31. Swirling – back and forth enrollment among two or more postsecondary institutions (de los Santos & Wright, 1990).
32. Technical program – a program typically offered by technical colleges designed to prepare students for the workplace. The program may result in a certificate, diploma, or an Associate of Applied Science.
33. Traditional horizontal transfer – movement from one four-year institution to another (Rooth, 1979).
34. Traditional student – a student who entered a postsecondary institution, often a community college, immediately after high school graduation. If the student attended a community college, he/she graduated with an associate degree and

transferred to a four-year institution to complete a bachelor's degree (Piland, 1995); "a young person who enters college immediately following high school graduation, enrolls as a full-time student, relies on parental support to finance some (if not all) of college costs" (Seftor & Turner, 2002, p. 337.)

35. Transfer – a formal movement of academic work toward a specific credential from one institution to another.
36. Transfer program – a program leading to an associate degree, or toward satisfying introductory collegiate courses in preparation for transfer to a four-year institution.
37. Transfer rate – "the number of students entering [a college] in a given year with no prior college experience who receive 12 units within four years, divided into the number of that group who enter a baccalaureate institution within four years" (Cohen, 1992).
38. Vocational transfer – two-year institution students in occupational, technical, or vocational programs who transfer to four-year institutions (Rooth, 1979).

CHAPTER II

LITERATURE REVIEW

This chapter is a review of prior research concerning reverse transfer students and the implications their presence have for community colleges. The first section of this chapter provides an overview of the literature that has contributed to the current knowledge of reverse transfer students. The section is further divided into subsections that pertain to each of the variables selected for this study: demographic characteristics, education background, motivations to participate in reverse transfer behavior, and intent to complete a credential. The second section focuses on previous research conducted in the community college system in Kentucky.

Reverse Transfer Research

Reverse transfer students are a subgroup of nontraditional students that attended a four-year college or university before enrolling in a two-year college. By definition, the reverse transfer phenomenon is unique to two-year educational institutions, primarily community and technical colleges. Community college faculty and administrators have known of the existence of students who attended four-year institutions in the community college student population for decades. Descriptive investigations of nontraditional students, and reverse transfer students specifically, date back more than 40 years (Clark, 1960). Some studies examined the reasons for reverse transfer behavior (Bigelow, 1982; Catanzaro, 1999; Hill-Brown, 1989; R. Ross, 1982), and the implications for institutions having large numbers of reverse transfer students in the student population (Adelman &

Burd, 2004; Burd, 2004; Education Resources Institute, 1997; Hagedorn & Castro, 1999; Yang, 2006). Other studies were purely descriptive of reverse transfer students (Bach et al., 1999; Brimm & Achilles, 1976; Drakulich & Karlen, 1980; Fischer et al., 1975; Florida Atlantic University, 1999; Grafton & Roy, 1980; Hogan, 1986), the extent of the phenomenon (City Colleges of Chicago, 2003; Cohen, 1985; Heinze & Daniels, 1970, Hudak, 1983), and the logistics involved in tracking such students (Ahumada, 1993; Clagett & Huntington, 1991; Ewell et al., 2003; Welsh, & Kjorlien, 2001). Studies have examined reverse transfer students in the context of community colleges nationwide (Heinze & Daniels, 1970; Hudak, 1983; Rodrigues, 1991), in state systems (Harris, 1997; Hillman et al., 2008; Hogan, 1986; Kuznik, 1972; Lambert, 1993; Winter & Harris, 1999; Winter et al., 2001), in districts (Baratta, 1992; de los Santos & Wright, 1990; Lee, 1975; Mitchell & Grafton, 1985), and within single institutions (Kirby, 1977; Meadows & Ingle, 1968; Pope et al., 2001; Quinley & Quinley, 1998a; Rooth, 1979; R. Ross, 1982).

The significance of the reverse transfer phenomenon as a topic of investigation comes from the increasing numbers of nontraditional students enrolled in postsecondary institutions. Martinez & Day (1999) reported the numbers of nontraditional aged students given by the U.S. Census Bureau as over six million, or 39% of all college students. The Association of Non-Traditional Students in Higher Education (ANTSHE) estimated that more than 47% of all college students were nontraditional (ANTSHE, 2000). Many researchers (Anderson, 2003; Carney-Crompton & Tan, 2002; City Colleges of Chicago, 2003; Haggan, 2000; Hoachlander, Sikora, & Horn, 2003; Houser, 2002; Justice & Dornan, 2001; KCTCS, 2006) use the designation "age 25 or older" to indicate student populations that are different than traditional college students.

Nontraditional students bring different demands and benefits to institutions they attend. As a result, student services will need to accommodate a wider range of student needs. Nontraditional students, and reverse transfer students specifically, are a very diverse group. To understand how to best serve these students researchers, institutions, and policy makers must first know who they are and how they are different from traditional students.

As explained in the previous chapter, postsecondary institutions are experiencing budgetary reductions from both state and federal sources. In Kentucky, as in other states (Bach et al., 1999; Phelan, 1999), recent legislative actions have tied funding levels to demonstrated measures of institutional effectiveness. The effectiveness measures used as indicators of performance are the number of credentials awarded, the number of students completing programs of study, the number of students retained from one semester to the next, and other similar, quantifiable statistics (Kentucky Postsecondary Education, 1997). Institutions are interested in showing large numbers of credentials awarded, and in getting students through programs as quickly as possible. Even though workforce development and career training are important parts of the community college mission, unless these activities translate into easily identifiable and quantifiable measures, they do not contribute to the overall demonstration of institutional effectiveness that justifies legislative expenditures. Specialized training and continuing education courses do provide new funding sources and a horizontal expansion of the community college mission, but whether the new funding source completely covers the costs associated with the new activities depends on the skill of the business office in matching institutional costs with student costs. Whether the horizontal expansion of mission contributes to the

measures of effectiveness also depends on the institution's ability to quantify how these activities contribute to overall institutional effectiveness (Yang, 2006). A student's accomplishment of educational goals that do not coincide with established programs of study and attendance for personal enrichment and curiosity also do not contribute to effectiveness measures, despite the recognized value of lifelong learning.

New programs vertically expanding community college missions are not always very successful in improving institutional effectiveness measures. While dual credit programs that allow high school students to earn college credit do not always translate into a stream of committed high school graduates entering the community college, programs coordinating community college students' courses with their ultimate goals at the four-year institution have contributed to increased successful transfer effectiveness measures (Yang, 2006).

The reverse transfer literature reveals that reverse transfer students have varied motives for attending the community college. By definition, they do not conform to the traditional postsecondary student model on which most legislation is based. Many, especially those who have completed a bachelor's degree, do not seek a credential, but attend to obtain specific skills or to fulfill specific desired educational goals that do not conform to standard institutional performance measures (Bach et al., 1999). Their attendance patterns are often erratic and they can take extended periods of time to complete programs of study when they do graduate (Adelman, 1999a; McCormick, 2003). However, reverse transfer students are committed enough to their educational goals to pursue them, frequently enduring considerable inconvenience and sacrifice in the process. With as much as 27% of the community college student population comprised of

reverse transfer students, their intention to complete a credential, and their attendance patterns can impact institutional funding acquisition and demands for student services.

Most models of transfer and retention are based on traditional attendance and transfer patterns (Pascarella & Terenzini, 1998). Reverse transfer students tend to switch from college to college, staying only as long as the college serves the student's purposes (Townsend, 1999). The Kentucky Postsecondary Education Improvement Act further facilitates this type of behavior by encouraging "seamless education" where barriers to transfer between state institutions are minimized. The intent was to assist transfer from community colleges to state universities and between state universities. It did not predict or acknowledge resultant attendance patterns. The reduction of barriers not only makes it easier for students to attend college, it also makes it easier for students to transfer and reverse transfer. The end result is a facilitation of reduced institutional performance measures.

U.S. Education Department regulations dictate that students transferring from one postsecondary institution to another be counted as dropouts by the institution the student left since the student did not complete his or her degree at that institution. The institution receiving the transfer also cannot count a student in their graduation rates that did not begin at that institution, even though the receiving institution awarded a degree (Burd, 2004). Increasingly, state and federal legislation tie student-aid programs, financial aid funds, and other resources to institutional performance measures, such as graduation rates.

The mobile nature of reverse transfer students, combined with transfer policies, makes it difficult for institutions to track individual student educational progression.

Many states have taken steps to develop centralized student-level databases, which would enable institutions to track student progression as they move between the institutions within a state. Adelman (2006), however, found that half of the students who attended more than one institution to earn degrees transferred across state lines. Ewell et al. (2003) found that, not only were transfer policies inconsistent across state lines, but within state postsecondary systems as well.

Reverse transfer students have educational goals and attendance patterns that may not easily conform to the outcomes that decision and policy makers measure. Knowledge of the goals and patterns of this group can lead to more accurate measures of goal attainment and recognition of diverse attendance patterns. The determination of recognizable predictor characteristics for program completion can facilitate the adjustment of program policies and structures to better accommodate reverse transfer student goals, and result in the enhancement of institutional effectiveness measures.

Demographic characteristics.

The characteristics of the student population reflect the composition of the general population. The numbers of students in various ethnic, cultural, and socioeconomic groups headed for postsecondary education in the near future is a direct result of the status of these groups in the general population today. Cohen and Brawer (1996) documented changes in nontraditional college student populations over a 25-year period. The changes included increases in the mean age, the number of females attending, the number of minority students enrolled, and the number of part-time students. E. Anderson (2003) observed that higher education in the United States is more diverse today than ever before. This is due to shifts in population characteristics and college attendance by

adults. As the "Baby Boom Echo", children of baby boomers, enters college and more adults begin or return to college, these trends will continue. As changes in the general population take place, the proportions of minority and low socioeconomic status students, as well as nontraditional students, will continue to change.

Gender.

As Cohen and Brawer (1996) observed, the number of females attending postsecondary institutions has increased over the past several decades. The increase in females in college would also mean an increase in the number of female reverse transfer students. With the exception of Slark (1982), Vaala (1990), and Quinley and Quinley (1998a), the literature on reverse transfer students since 1979 documented the increase of female reverse transfer students to more than 50% (Table 1). Keeping in mind the life roles that female students have, student services, such as childcare and schedule flexibility, can be issues that influence retention and completion.

While the reverse transfer student population tends to contain more males proportionately than the general student population, the increase in female students in both the general student population and the reverse transfer student population still puts males in the minority at most institutions. G. Lee (1975) found that a higher proportion of reverse transfer students were female (43%) than native students (32%). However, in keeping with other studies conducted at that time, there were more male reverse transfer students (57%) and native students (68%).

By 1982, studies began to show higher female reverse transfer student populations than male reverse transfer student populations. Ross (1982) found that 59.6% of the reverse transfer student population and 60.0% of completer reverse transfer

students at Piedmont Virginia Community College were female. These proportions were slightly less than the general student population, 62.5%. Slark (1982) conducted a study at the same time in California, however, and found that 57.4% of the reverse transfer students were male and 42.6% were female, compared to a predominantly female general student population.

Mitchell and Grafton (1985) compared reverse transfer, lateral transfer, and first-time community college students in California. The sample was 51% female, statistically similar to the general student population. Completer reverse transfer students were more likely to be male. Noncompleter reverse transfer students were similar to the other groups, and were more likely to be female.

Of all reverse transfer students in Hogan's (1986) study, 41.6% were male, compared to 36.1% of native students, the difference was not statistically significant (ANOVA $F = 3.286$, Significance = .07). Hill-Brown (1989) also found that the distribution of males and females were similar to the reverse transfer population across the groups within reverse transfer students (59% female, 41% male).

Reverse transfer student demographics were different in Canada. A study by Vaala (1990) showed that more males than females reverse transferred (75 males and 70 females in 1988, 89 males and 53 females in 1989). In addition, it also showed that reverse transfer students were younger ($M = 25.5$ years) than the general community college student population ($M = 26.1$ years). Quinley and Quinley (1998a) also found more male reverse transfer students (56%) than female reverse transfer students (44%), but their study examined only reverse transfer students who had received a bachelor's degree before entering the community college.

Florida Atlantic University (1999), one of the few universities to track students outside their own doors, found that 54% of the students who were first-time students at Florida Atlantic University and enrolled at least one term at a community college during their educational career were female. Pope et al. (2001) found that 53.8% of completer reverse transfer students were female, compared to 56.6% of the general student population in their study. Townsend (2003) also found that 56% of the completer reverse transfer population was female.

Many researchers also discovered differences between male and female reverse transfer students on a number of measures. Kuznik (1972) found that, not only did slightly more female reverse transfer students intend to seek graduate degrees, but more female students also did not anticipate pursuing formal education beyond the community college, whether they completed a credential or not. Female students felt more positive about their experience at the four-year institution, but slightly less satisfied with their community college experience than their male counterparts.

One of the possible reasons for disparity in earlier male and female reverse transfer student numbers is the difference in financial status. A study conducted by Rooth (1979) revealed that the annual income of female reverse transfer students was lower than male reverse transfer students. The majority of reverse transfer students give improving employment as an important reason for attending the community college, but more females than males listed this reason as most important. While low income may have limited access to higher education, it also provided substantial motivation for enrollment for female students.

Table 1

Gender of Reverse Transfer Students in Previous Literature

	Kuznik 1972	Fischer, Kellerman, & Odom 1975	G. Lee 1975	Rooth 1979	Slark 1982	Ross 1982	Hogan 1986	Hill-Brown 1989	Vaala 1990	Kajstura & Keim 1992	Harris 1997			Quinley & Quinley 1998	Florida Atlantic University 1999	Pope, Turner, & Barker 2001	Townsend 2003
	RT	RT	RT	RT	RT	RT	RT	RT	RT	RT	RT	NCRT	CRT	RT	RT	RT	CRT
female	33.3%	36.3%	43.0%	56.0%	42.6%	60.0%	58.4%	59.0%	37.3%	56.0%	66.4%	67.7%	60.8%	44.0%	54.0%	53.8%	56.0%
male	66.7%	62.8%	57.0%	44.0%	57.4%	40.0%	41.6%	41.0%	62.7%	44.0%	33.6%	32.3%	39.2%	56.0%	46.0%	46.2%	44.0%

* RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

Windham and Perkins (2000) found that not only did female completer reverse transfer students outnumber males, but also they held higher degrees. The ratio for bachelor's degree recipients was 1.5 females for every male. The ratio increased to 1.9 to one for master's recipients, and 1.7 to one for doctoral recipients.

Ethnicity.

One of the missions of community colleges is to serve underserved populations, such as ethnic minorities, students with low socioeconomic status, and students who do not want to pursue an academic degree or are underprepared to do so. Historically, the traditional community college student population was comprised of a large proportion of minority students. For many, the community college is their only chance to pursue postsecondary education. Reverse transfer students, however, have proven that they not only have the academic preparation to enter a four-year institution, but many have successfully completed a baccalaureate degree or higher. Community colleges are charged with open access to all students, but in programs where admission is competitive, reverse transfer students have the advantage through proven academic performance.

Throughout the literature, the ethnic composition of reverse transfer students was similar to the general student body. The proportions of ethnic minorities were similar in relation to each other as in the general student population, but with the ethnic majority comprising a larger proportion of the reverse transfer population than in the general student population. With the exception of one study (Drakulich & Karlen, 1980), the ethnic majority was White.

Unlike the changes in gender ratios, differences in ethnic composition showed no clear pattern over time. Many of the earliest studies did not examine ethnicity in the

reverse transfer student population and little research exists examining the effects of ethnicity on motivations and attendance patterns. Respondents in the study by Fischer et al. (1975) in Florida were 90.9% White and 2.7% African American. In Arizona, 98% of the participants in Rooth's (1979) study were White.

The study conducted by Drakulich and Karlen (1980) at a community college in New Jersey demonstrated unusual ethnic composition in both the general student population and the reverse transfer student population. All new students were 69.3% African American and 11.7% White. Reverse transfer students were 44.3% African American and 44.3% White. Proportionately, there were still more White reverse transfer students than in the incoming general student population.

The study population in Rooth's (1982) study in Virginia had no African American completer reverse transfer students and 96% White completer reverse transfer students compared to 8.8% and 89.2% respectively in the general student population.

In the study by R. Ross (1982) in Virginia, African American reverse transfer students rated improving reading and study skills as important more often than did White reverse transfer students. African American reverse transfer students also rated improving social life and attending in response to encouragement from a spouse or parent as somewhat more important than did White reverse transfer students.

In the study by Bigelow (1982), the largest ethnic minority was Hispanic, with two of the 30 participants in that category. Twenty-seven participants were White. In Kansas, Hill-Brown (1989) found that the ethnic distribution was similar in all subgroups of reverse transfer students to the distribution in all reverse transfer students with 85% White, and 1% each of African American and Hispanic.

Hogan (1986) found that African American reverse transfer students comprised 6.6% of entering community college students, compared to 7.9% of non-reverse transfer students. Analysis of variance revealed that this difference was statistically significant (F = 6.884, Significance = .008). Ethnicity, but not gender, was associated with remedial enrollment. African American students accounted for nearly 17% of the reverse transfer students in remedial courses.

In Illinois, Kajstura and Keim (1992) found that 95% of reverse transfer students were White, 3% were African American, 1% were Asian, and less than 1% were Hispanic. A χ^2 analysis revealed that there was a statistically significant relationship between ethnicity and gender ((1, N = 296) – 4.693, p = .030).

Ten years after Hogan's study in Kentucky, Harris (1997) found that the reverse transfer population had become slightly more diverse. Of all reverse transfer students, 88.2% were White, 8.8% were African American, 1.3% were Asian American, 0.8% were Hispanic American, and 0.9% were Native American. Harris performed a χ^2 analysis to determine if there was an association between ethnicity and reverse transfer status. The results were χ^2 (4, N = 873) = 12.75, $p < .05$, indicating that there was a significant relationship between ethnicity and reverse transfer status.

Windham and Perkins (2000) found that the ethnic distribution of completer reverse transfers students was similar to the ethnic distribution of bachelor degree recipients in the Florida state university system during the 11 years of their study. Reverse transfer students holding master's degrees also exhibited a similar pattern, with 84% White, 7% African American, and 6% Hispanic.

Table 2

Ethnicity of Reverse Transfer Students in Previous Literature

	Fischer, Kellerman, & Odom 1975	Rooth 1979	Drakulich & Karlen 1980	Ross 1982	Hill-Brown 1982	Hogan 1986	Kajstura & Keim 1992	Kearney, Townsend, & Kearney 1995	Harris 1997			Quinley & Quinley 1998	Florida Atlantic University 1999	Windham & Perkins 2000	Pope, Turner & Barker 2001	Townsend 2003
	RT	RT	RT	CRT	RT	RT	RT	RT	RT	NCRT	CRT	CRT	RT	CRT	CRT	RT
White	90.9%	98%	44.3%	96.0%	85.0%	92.3%	95%	73.0%	88.2%	87.1%	93.2%	82%	75.1%	75.0%	81.5%	73.0%
African American	2.7%		44.3%	0.0%	1.0%	6.6%	3%	11.0%	8.8%	10.1%	2.7%	12%	9.5%	10%	4.3%	
Hispanic			5.6%		1.0%		<1%	7.0%	0.8%	1.0%	0.0%	1%	10.3%		1.6%	
Asian			1.1%		0.9%		1%	9.0%	1.3%	1.0%	2.7%	5%	3.6%	4%	1.6%	
Native American/ Alaskan			2.2%		0.3%				0.9%	0.8%	1.4%	0%	0.4%		3.8%	
Puerto Rican			1.1%													
Other					0.4%	1.1%							1.0%		7.2%	

* RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

As with other studies, Pope et al. (2001) found that there was a higher proportion of White completer reverse transfer students in Kansas than in the general student population (81.5% compared to 69.8%). The largest minority group in the completer reverse transfer students was African American (4.3%), but the largest minority group in the general student population was Asian (7.8%). These groups were still proportionately smaller in the completer reverse student population than in the general student population. African American students were 6.3% of the general student population. Asian students were 1.6% of completer reverse transfer students, fourth place behind Native American completer reverse transfer students (3.8%, 5.3% of the general student population).

As seen on Table 2, with few exceptions (Drakulich, & Karlen, 1980; Kearney et al., 1995; Townsend, 2003), the reverse transfer student population tended to be at least three quarters White. The second largest ethnic group was usually African American, and Asian and Hispanic groups were sometimes large enough to measure. Institutions must decide whether to give proven academic performance priority or to give added weight to ethnicity to support diversity initiatives.

Marital status.

Because reverse transfer students are older than traditional community college students, a variety of associated issues increase in relevance. Few traditional community college students are married. Their support systems usually consist of family and close friends. While traditional students may play a variety of roles outside of student, the average reverse transfer student is more autonomous. The roles played by reverse transfer

students usually carry far more responsibility. Reverse transfer students also usually have less extensive support systems (Carney-Crompton & Tan, 2002). Depending on the marital status of the student and the condition of the student's relationships, a reverse transfer student may have support or stressors in the home.

The demands of supporting a family as head of household can compete for students' attention and time. A student supporting a family alone also has financial issues to manage. Fischer et al. (1975) found that 53.4% of reverse transfer students were married, 54.6% had no children, and 53.0% were head of households. Drakulich and Karlen (1980) found that more reverse transfer students were either married (20.4% versus 12.2%) or divorced (5.6% versus 3.9%) than first time students. This is understandable since reverse transfer students tend to be older.

Of the 30 adult reentry women in Bigelow's (1982) study, 28 had been married for substantial periods of their adult lives (average of 21 years), and most had several children. The average age of the participants when they first married was 21 years, and slightly less than half were still married when they returned to college. There was a high incidence of divorce among the participants. Nearly half of the participants had recently divorced or had impending divorce. The majority of the husbands and ex-husbands were successful businessmen and professionals. More than half held a bachelor's degree or higher. While 39% of the participants held a bachelor's degree, they also had more advanced degrees than their spouses or former spouses. Five times as many wives as husbands had master's degrees, and twice as many had doctorates.

While having a spouse or other relationship can provide a support system for the adult student, Hill-Brown (1989) found that marriage was given by most of the delayed

Table 3

Marital Status of Reverse Transfer Students in Previous Literature

	Kuznik, Maxey, & Anderson 1974	Fischer, Kellerman, & Odom 1975	Rooth 1979	Drakulich & Karlen 1980	Kajstura & Keim 1992			Harris 1997			Townsend 2003
	RT	RT	RT	RT	RT	NCRT	CRT	RT	NCRT	CRT	CRT
Married	21.0%	53.4%	48.0%	20.4%	52.0%	38.0%	75.0%	38.2%	36.1%	48.6%	53.0%
Single	74.0%	39.3%		65.9%				51.5%	54.4%	37.8%	
Divorced		7.3%		5.6%				7.6%	7.1%	10.1%	
Separated				4.5%				1.6%	1.9%	0.0%	
Widowed				2.2%				1.0%	0.5%	3.4%	

* RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

reverse transfer students in that study as one of the main reasons they left the four-year institution during their first attempt at postsecondary education. School counselors commented that these students often returned to school in response to a life event, such as the death of a spouse or divorce.

Kajstura and Keim (1992) found that 52% of reverse transfer students were married. A χ^2 analysis revealed a statistically significant difference between completers (75% married) and noncompleters (38% married).

The literature reveals that, in all studies, a large proportion of reverse transfer students are married (Table 3). In the few instances where reverse transfer demographics were compared to the general student population, a larger proportion of reverse transfer students than general population students were married. The proportion of reverse transfer students that were married varied widely, which may be reflective of populations in different geographic areas and/or different points in time. Having another adult in the household can be helpful if that person is supportive of the student's educational efforts, but can also be detrimental if that person is not. None of the studies examined recorded the incidence of co-habitants, who might play the part of a spouse in the support system of the student without the formality of marriage.

Dependent children.

Researchers have given the number and ages of dependent children of reverse transfer students little attention. As discussed in the Gender section, the majority of reverse transfer students tend to female. Because women tend to be the primary caregivers of children and other family members, it is expected that females would experience greater external family influences on the decisions to return to school, to

remain in school, and to complete a credential. While most of the literature examined students in four-year institutions, the pressures of family life would be similar for women returning to any school.

Several researchers (Bethune, 1977; Bigelow, 1982; Fischer et al., 1975; Kajstura & Keim, 1992; Mitchell & Grafton, 1985; Rooth, 1979; Townsend, 2003) mentioned that reverse transfer students had children and some compared the likelihood or number of children of reverse transfer students to traditional students or the general student population. No analysis of possible effects was reported.

Some research has examined effects of dependent children on nontraditional students, however. In a Canadian study conducted by Carney-Crompton and Tan (2002) nineteen of the nontraditional students had one to four children ($M = 2.37$, $SD = 3.49$), ranging in age from eight to 22 ($M = 14.29$, $SD = 4.14$). None of the traditional students had children. Nontraditional participants cited child as a source of emotional support, t (19) = -6.01, $p < .01$, and instrumental support, t (19) = -4.16, $p < .01$, significantly more often than did traditional participants. The researchers found that the psychological and academic status of the nontraditional students were unrelated to the quality and quantity of their support systems, which contradicted earlier research findings. They speculated that one reason for the contradiction could be that the ages of the children in the care of the participants were older than in most other literature. Home (1998) and others (B. Anderson & Miezitis, 1999; Leavitt, 1989; Scott, Burns, & Cooney, 1996; Thacker & Novak, 1991) found that students caring for younger children experienced higher role conflict and demand, higher incidences of maternal and student stress, greater course dissatisfaction, and greater levels of difficulty in meeting academic and personal needs

than students caring for older children. Other research (MacKinnon-Slaney et al., 1988; Murphy & Achtziger, 1982; J. Ross, 1988; Sewall, 1984) indicated that children entering school or leaving home were triggers for women to return to college.

Age.

The increased age of reverse transfer students reflects overall trends seen in all of higher education. Not only is the general population aging, between 1970 and 1993 the number of students enrolled in all sectors of postsecondary education age 40 and older grew by 235% (Education Resources Institute, 1997). Within the classroom, instructors and students face increasing age, experience, and ethnic diversity. The psychological functioning of older students is different from that of traditionally aged students, which leads to different modes of learning. Evidence exists that older students experience the classroom environment differently than traditional-age students (Justice & Dornan, 2001). Researchers (Adelman, 1999a; ANTSHE, 2000; Cohen & Brawer, 2003) give many figures in the range of 30% to 50% as the number of students enrolled in American colleges that are age 25 or older. Since reverse transfer students tend to be older than traditional students, a variety of characteristics, such as cognitive functioning, level of commitment, motivations, and goals, may be different enough to warrant attention by educators.

The literature suggests that older students are committed to attaining their educational goals (Winter & Harris, 1999). Maturity, knowledge of self, and life experiences may account for older student adaptability and the ability to discover successful learning strategies (Klein, 1990). Older students also place greater importance on comprehension and understanding than do their younger counterparts (Lambert, 1994).

The implication is that postsecondary teachers with older students in the classroom need to address differing approaches to learning course materials. Because of many of the attributes and responsibilities that come with age, the implications for the institution are that outside demands can force the older student to have erratic attendance patterns, and completion of a credential can take an extended period of time.

The study conducted by G. Lee (1975) revealed a difference in exit status from the four-year institution across the age groups. Reverse transfer students exiting in "clear status" were older, with larger percentages of married and female students. Approximately one quarter of the students in the "clear status" group were over the age of 25.

In Northampton County, Pennsylvania, Rooth (1979) found that reverse transfer students tended to be much older than the general student population, with almost 80% the age of 22 or older, and 37% age 30 or older. Almost 90% of reverse transfer students were 19 years old or younger when they entered the four-year institution. By the time these students reached the community college, 66% were age 23 or older, and 30% did not enter the community college until at least age 30.

The student sample in the study by Mitchell and Grafton (1985) divided almost evenly into three age groups, with 35% under 21, 35% age 22 to 30, and 30% over age 30. Completer reverse transfer students were older than the other three groups.

In the study by Hogan (1986) more than twice as many reverse transfer students were over the age of 25 (49%) as native students (24%). The average age of reverse transfer students was 26.7, compared to 22.5 for other new students. Using ANOVA, the difference was found to be significant ($F = 142.7$, Significance = .0001).

Hill-Brown (1989) found that the age distribution across the groups of reverse transfer students were similar, ranging from 19 to 74 years, with a mean of 29.33. Immediate reverse transfer students were the youngest, with an average of 22.5 years. The mean age of delayed reverse transfer students was 31.5, and the mean of completer reverse transfer students was 34.0.

While reverse transfer is a phenomenon unique to community colleges, it is not unique to the United States. Vaala (1990) investigated student mobility within the postsecondary system in Alberta, Canada, particularly the extent of university-to-college attendance patterns. Contrary to other studies, the researcher found that reverse transfer students in Alberta, Canada were younger than other community college students, averaging 25.5 years for reverse transfer students compared to 26.1 years for all students at the college.

Kajstura and Keim (1992) found that reverse transfer students were older (M = 29.6) than the average two-year college student and reverse transfer students described in other studies. The researchers conducted a t-test and found that there was a statistical difference between the age of completers (36.7 years) and non-completers (27.1 years).

The Education Resources Institute (1997) and the Institute for Higher Education Policy produced a report on students over 40 in postsecondary education. They found that between 1970 and 1993, enrollment of students over 40 in all areas of postsecondary education increased by 235%, taking the proportion of the total higher education enrollment from 5.5% to 11.2%. Over the same time period, traditional students age 18 to 24 dropped from 69.1% of total higher education enrollment to 54.9%. At the time of the

Table 4

Age of Reverse Transfer Students in Previous Literature.

	Fischer, Kellerman, & Odom 1975	G. Lee 1975	Rooth 1979	Slark 1982	Ross 1982	Hogan 1986	Hill-Brown 1989	Vaala 1990	Kajstura & Keim 1992			Kearney, Townsend, & Kearney 1995	Harris 1997			Quinley & Quinley 1998	Pope, Turner, & Barker 2001
		RT	RT	RT	CRT	RT	RT	RT	RT	NCRT	CRT	RT	RT	NCRT	CRT	CRT	CRT
average age				31.6		26.7	29.33	26	29.6	27.1	36.7		30.7	29.33	37.46		38
17	0.0%	72.0%	21.0%	0.4%	0.0%	50.6%							0.6%	39.8%	5.4%		
18	0.9%											62.0%					
19	21.6%															5.0%	
20				5.9%									39.9%				
21	27.1%																
22		14.0%	42.0%	13.1%	17.0%												
23-24												28.0%					
25	18.0%	14.0%		26.6%	59.0%	49.4%							16.1%	60.2%	94.6%	13.0%	
26-28												5.0%					
29	8.8%		37.0%	26.6%									25.0%			31.0%	
30					17.0%							2.0%					
31-33	6.1%																
34												3.0%	12.4%			51.0%	
35-38	14.6%			19.4%	8.0%												
39													5.2%				
40	2.7%			6.7%													
41-44				1.3%									0.8%				
45-49																	
50																	
51-64																	
65 & over																	

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

report, over-40 students comprised approximately 10% of undergraduates, 22% of graduate students, and 6% of professional students.

The report did not address the attendance patterns of these students, but, based on other studies, a case can be made that a substantial portion of the over-40 student population are reverse transfer students. Quinley and Quinley (1998a) found that over half of the reverse transfer students in their study were over 41, and more than 80% were over 30. Pope et al. (2001) found that the average age of the completer reverse transfers in their study was 38, about nine years older than that of the overall student population at the study institution.

As can be seen on Table 4, the average age of reverse transfer students in the literature is over the age of 25. With the exception of the study by Vaala (1990), all categories of reverse transfer students were older than the general population of the target institution. With greater age comes a number of positive attributes, such as maturity, knowledge of self, and greater life experience, as well as some negative attributes, such as family responsibilities, reduced support systems, work responsibilities, and, sometimes, health issues.

Employment status.

Intuitively, one would expect work commitments to infringe on a student's time to devote to schoolwork and affect overall performance and the ability to complete a credential. For this reason, it was common practice for institutions to restrict the course load of incoming students during their first, and sometimes second, term. Advisors also routinely recommended that new students not work during this adjustment period. These recommendations were also given to reverse transfer students entering the community

college. Many researchers included employment status in the demographic data they gathered to determine if the recommendations were warranted.

Fischer et al. (1975) found that two groups emerged in their study, reverse transfer students who did not work (16.8%) and those who worked 35 or more hours per week while attending classes (54.3%). The individual patterns varied with the colleges investigated. While at the four-year institution, the groups were split fairly evenly between those who did not work (37.5%), those who worked less than 35 hours per week (31.4%), and those who worked 35 hours per week or more (31.1%).

Approximately half of the reverse transfer students in Rooth's (1979) study did not work while at the four-year institution. During their enrollment at the community college, 50% were employed full-time, with another 37% employed part-time.

Hogan (1986) found that the reverse transfer students in her study were more likely to be employed full-time (43.7% of reverse transfer students, 25.8% of native students) and more likely to be employed in a professional or managerial position (33.5% versus 14.8%). There was no analysis of the influence of age on these factors but managers tend to be older than entry-level workers.

In the study by Kajstura and Keim (1992) a χ^2 analysis showed that more completer reverse transfers held full-time jobs (48%) than part-time jobs (34%), and there was a statistically significant difference between completers and noncompleters by employment status, χ^2 (3, N = 296) = 35.465, p = .005. Sixty percent of the noncompleters had part-time or no jobs, 69% of completers held full-time jobs. Within the noncompleter group, there was a significant difference between the number of males (58%) and females (44%) who worked full-time, χ^2 (1, N = 210) = 3.891, p = .0491.

Table 5

Employment Status of Reverse Transfer Students in Previous Literature.

		Fischer, Kellerman, & Odom 1975	Rooth 1979	Kajstura & Keim 1992			Harris 1997			Townsend 2003
		RT	RT	RT	NCRT	CRT	RT	NCRT	CRT	CRT
Unemployed	0	16.8%			60.0%		20.3%	21.4%	14.9%	
Part-time	1-5 hrs/wk	2.1%	37.0%	34.0%			32.0%	33.1%	27.0%	
	5-10 hrs/wk	0.9%								
	11-15 hrs/wk	2.4%								
	16-20 hrs/wk	7.0%								
	21-25 hrs/wk	5.8%								
	26-30 hrs/wk	5.5%								
	31-35 hrs/wk	4.0%								
Full-time	35+ hrs/wk	54.3%	50.0%	48.0%		69.0%	47.7%	45.5%	58.1%	71.0%

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

Contrary to expectations, Quinley & Quinley (1998a) found that most completer reverse transfer students had considerable, not limited, work experience. Approximately half of the participants reported having worked in their field for more than five years, and the average of these was 16 years.

What emerged from the literature is that reverse transfer students are adept at juggling the many demands of adult life. In keeping with greater age and outside responsibilities, reverse transfer students have more practice managing the demands on their time. Reverse transfer students have the obligation to work to support themselves and, often, their families. Work, usually full-time employment, is not an option. Continuing or a return to education is beneficial, if not required, for many jobs. Despite working full time and caring for a family, reverse transfer students fit classes in when they can and, consequently, my take extended periods of time to attain their goals

Education background.

The education background of reverse transfer students is as diverse as the students themselves. While most entered the four-year institution soon after graduating from high school, some waited a few years. Once the reverse transfer students left the four-year institution, there are several paths they took to the community college. Some left the four-year institution in academic difficulty, some lacked the financial status to continue in a more expensive educational situation, some entered the workforce, and some had personal or family obligations that prevented continued enrollment at the four-year institution. A variety of factors influenced the reverse transfer student's choice to leave the four-year institution and enter the community college. Some of these factors also influenced the reverse transfer student's decision to re-enter college.

Attendance patterns.

Early attendance patterns of reverse transfer students were assumed to be fairly simple. Students in academic difficulty at the four-year institution took a few terms at the community college to boost their grade point averages (GPAs), and returned to the four-year institution to complete a bachelor's degree (Clark, 1960). Reverse transfer students were close to traditional age, did not take any time off, and attended only two or three institutions. Because little research was done on this group of students before the mid 1970s, it is unknown whether this was actually the case, or just a perception of the phenomenon.

More detailed examinations of the phenomenon in recent years revealed complex patterns of attendance involving multiple institutions, periods of nonattendance, full and part-time status, concurrent enrollments, and shifts in programs of study. A conservative estimate for the number of reverse transfer students in the fall 1998 semester was approximately one million (Welsh & Kjorlien, 2001). With greater frequency, students attend more than one institution simultaneously. A reverse transfer student may have an attendance history that includes many institutions, both two-year and four-year, as well as virtual universities. Traditional-aged students use concurrent enrollment to speed the time to a credential. Nontraditional-aged students use multiple institutions to gain skills and knowledge to reach their academic and career goals.

Preparation for transfer with the expressed purpose of gaining a degree is still an important function of the community college, but the path often is circuitous and interrupted. Of the reverse transfers leaving the four-year institution in academic difficulty in Kuznik's (1972) study, over 90% thought they had the ability to complete a

bachelor's degree, and approximately two thirds indicated that they intended to do so. Only 22% intended to return to their original four-year institution (McCormick, 2003).

> Townsend (1999) described recent reverse transfer attendance patterns well;
>
> ...reverse transfer students contradict traditional models of transfer on which so many retention studies have been based. Rather, these students' transfer behavior suggests a new model – one in which students switch from college to college, much the way television viewers switch channels. As long as a college serves students' purposes, they will stay, but once it no longer meets their needs, they switch to another college... but they are ultimately in charge of their educational experience as they seek to achieve their educational goals. (p.3)

Over time, the number of institutions students attended to receive a bachelor's degree increased, as did the length of time they take to obtain it (Adelman, 1999a).

In 1975, Fischer et al. found that the average number of terms reverse transfer students spent at the four-year institution was 2.7, the same as the number of terms attended at the community college. While the number of terms attended varied some between institutions, 57.3% attended two or fewer terms at the four-year institution, and 54.2% attended two or fewer terms at the community college. Interestingly, 23.8% of the reverse transfer students spent four or more terms at the four-year institution, and 28.7% attended four or more terms at the community college. The similarity of these figures may lead one to wonder if there was an unknown dynamic at work unrelated to the institution or the student's transfer status.

Lee (1975) found that 19% of reverse transfer students were readmitted to a state university, and 26% were still enrolled at the community college at the conclusion of the

study, and 55% left college without completing a program. Of the reverse transfer students who returned to a four-year institution, 70% were male and 30% were female, similar to the native student population (67% male, 33% female). A larger proportion of reverse transfer students who reentered a four-year institution were single and younger, while a larger proportion of the reverse transfer students still at the community college were older and married. Of the reverse transfer students who were still enrolled in a transfer program, 62% were male and 38% were female, similar to the native student population. It was common for male reverse transfer students in semi-professional programs to leave the community college to accept employment without completing a program. Almost half of the reverse transfer students who left the community college were female and 84% were not married.

Rooth (1979) found that 43% of the reverse transfer students in the study were new enrollees, and 56% were returning reverse transfer students, either continuing immediately or after a stop-out. Almost half of the reverse transfer students had taken over 70 semester hours at the four-year institution.

Of the reverse transfer students in the study by Drakulich and Karlen (1980), 40.9% planned to transfer to a four-year institution immediately upon leaving the community college. Some of the women (80%) in the study by Bigelow (1982) had taken courses for enjoyment or related to work at local state and community colleges during the four to five years prior to the decision to complete a degree.

In the study by Slark (1982) 26% of the sample of reverse transfer students completed less than 60 units at the four-year institution. Forty-eight percent of all reverse

transfer students transferred from four-year institutions out of state, out of country, or a private college.

In the study by Hogan (1986), 49.3% of reverse transfer students attended a four-year institution within the year prior to enrolling at the community college. Of these, 40% earned 30 or more credit hours at the four-year institution.

In the study by Hill-Brown (1989), three groups of reverse transfer students emerged. Immediate reverse transfers did not complete a degree at the four-year institution and entered the community college within one or two semesters. Delayed reverse transfers also did not complete a degree at the four-year institution, but waited three or more semesters before entering the community college. Postgraduate reverse transfers completed a degree at the four-year institution before entering the community college. Reverse transfer students averaged about three semesters or terms at the four-year institution before transferring. Immediate reverse transfer students earned an average of 45.19 credit hours at the four-year institution and delayed reverse transfer students earned an average of 45.34 credit hours at the four-year institution. Of the immediate reverse transfer students, 21% stopped-out at some point at the four-year institution. The older students interrupted their education to marry, for military service, to enter the workforce, or because of the lack of money to continue. Of the delayed reverse transfer students, 40% stopped-out at the four-year institution. Amongst the immediate and delayed reverse transfer students, 60% made at least one transfer before transferring to the community college, and they often transferred to the community college from institutions across the country and abroad. Delayed reverse transfer students were the

most likely to have made a transfer before the reverse transfer and more had attended the subject community college before reverse transferring.

All reverse transfer students demonstrated a pattern of great mobility among institutions both in and out of state, and more attended out-of-state institutions than in-state institutions. Immediate reverse transfer students attended in-state institutions more often than they attended out-of-state. The researcher suggested that this might have been due to the younger age and more limited mobility of the group. Fifty-two percent of all reverse transfer students attended in-state high schools, 42% attended out-of-state high schools, and 1% attended high school out of the country (Hill-Brown, 1989).

In Canada, Vaala (1990) found that, of the transfers among postsecondary institutions, 20% went to community colleges and 19.5% went to technical colleges. The majority of the transfers from universities were into community colleges, and 45% of the transfers from universities were into technical colleges. Nearly 20% of the student population at the study college reported attending another postsecondary institution before enrolling in the college. About half of the reverse transfer students came directly from a four-year institution, over 40% were in the workforce, and less than 10% came from another area.

Kearney et al. (1995) found that 420 multiple-transfer students attended 305 higher education institutions, and that these institutions represented 1,002 student transfer decisions and 1422 enrollment decisions. The majority (72%) attended two schools prior to the subject university, but 21% attended three and 7% attended four to seven. Fifty-four percent began at a four-year institution, and 69% of those subsequently transferred to a community college. In contrast to some other studies (Hill-Brown, 1989), 67% of the

multiple transfer students remained in the same state during their first two transfers. Students who transferred among four or more colleges before enrolling at the subject institution were significantly more likely to be older (χ^2 (20) = 75.083, $p < 0.0000$) than those who had attended only two previous institutions. These students were also more likely to be African American, and less likely to persist at the subject university than those who had transferred less frequently.

The multiple transfer students separated into four groups based on their transfer pattern. Reverse transfer students (4-2-4) are of interest in this examination. Students in this group initially attended a four-year institution, transferred to one or more community college, and then transferred to the subject university. This was the most common path, and was followed by 33% of the multiple transfer students. Students in this group were more likely to have participated in a college preparatory high school program, and more likely to persist at the subject university through the semester after transfer.

Florida Atlantic University (1999) records showed that about 11% of their entering students attended at least one semester at a Florida community college after they left the university. They acknowledge that over a third of the students they counted as dropouts in their retention studies actually were reverse transfer students. Among the two-year institutions receiving Florida Atlantic University transfer students were 22 Florida community colleges. Most of the reverse transfer students spent one year at the university before transferring, and between 20 and 30% spent only one term. The university did not count students who returned to a Florida university after their enrollment at the community college as reverse transfers. At the community college,

approximately 35% enrolled for only one term, between 20 and 30% enrolled for two terms, and 25% enrolled for three terms.

The implications of attendance patterns for institutions are many and complex. The widespread occurrence of multiple institutional attendance, coupled with increasing numbers of educational providers and sources, means that institutions not only need to understand the various patterns of student attendance, but also need to develop more sophisticated systems of tracking student movements and more extensive interinstitutional agreements.

Period of non-attendance.

Often reverse transfer students return to college many years after their initial college experience. Adelman (2006) found that June high school graduates that waited to enter college in January were dramatically less likely to complete their degree. Similarly, college students were more likely to graduate if they were continuously enrolled, even if they attended only part-time for a portion of their path to a degree. He attributed the decline in degree completion to a break in academic momentum.

The reasons for a period of non-attendance are almost as numerous as the students. Sometimes a student may have multiple "stop-out" periods, and may take a very long time to reach his or her educational goals. Often outside events force changes in educational plans. Changes in life or work situations can trigger the desire to complete something left unfinished some time ago.

Fischer et al. (1975) found that 44.8% of the reverse transfer students had a lapse of more than 21 months from the time they left the four-year institution to the time they entered the community college. Ten percent entered the community college less than a

month after leaving the four-year institution. In the study by Rooth (1979), 46% of the reverse transfer students had waited three years or more to enter the community college, and 35% waited a year or less.

Slark (1982) examined reverse transfer students' time lapse by the number of units completed at the four-year institution and community college program. Of vocational students with fewer than 60 previous units, 20.8% entered the community college immediately, 25.0% waited less than three years, 25.0% waited four to seven years, 4.2% waited eight to 11 years, 8.3% waited 16 to 20 years, and 16 .7% waited 21 to 50 years. Of students in transfer programs with less than 60 prior units, 36.0% each entered the community college immediately and waited less than three years, 4.0% waited four to seven years, 20% waited eight to 11 years, and 4.0% waited 12 to 15 years. Of students enrolled for personal interest with less than 60 previous units, 42.9% waited less than three years, and 57.1% waited 21 to 50 years. Of the students in developmental programs with less than 60 previous units, 20% each waited four to seven years, eight to 11 years, 12 to 15 years, 16 to 20 years, and 21 to 50 years.

For reverse transfer students with more than 60 units in vocational programs before transfer, 12.2% entered immediately, 24.4% waited less than three years, 22.0% waited four to seven years, 12.2% waited eight to 11 years, 7.3% waited 12 to 15 years, 9.8% waited 16 to 20 years, and 12.2% waited 21 to 50 years. Of the students in transfer programs, 23.8% entered the community college immediately, 33.3% waited less than three years, 21.4% waited four to seven years, 7.1% waited eight to 11 years, 9.5% waited 12 to 15 years, 2.4% waited 16 to 20 years, and 2.4% waited 21 to 50 years. Of the students enrolled for personal interest, 20.5% entered the community college

immediately, 27.2% waited less than three years, 15.9% waited four to seven years, 4.5% waited eight to 11 years, 13.6% waited 16 to 20 years, and 18.2% waited 21 to 50 years. Of students enrolled in developmental programs 12.5% each entered the community college immediately, waited less than three years, and waited 21 to 50 years, and 50.0% waited four to seven years.

Altmaier and McNabb (1984) reported on a series of workshops conducted by the University of Iowa in response to the increased interest of older students to return to school. Their examination of the 1981 workshops noted enrollment of students 20 to 64 years old, and an average absence from school of 11 years. While 11% had no college experience, 11% had completed at least one year of graduate work, and half had bachelor's degrees. While these results were for students returning to a university, similar interest and greater numbers are reported by community colleges.

Of the participants in the study by Hill-Brown (1989), 38% of the noncompleter reverse transfer students waited three or more semesters before entering the community college. Bonham and Luckie (1993) found that reverse transfer students often let substantial amounts of time elapse between college attendance periods. While a student might intend to remain in school, life circumstances may prevent the student from doing so. In the study by Quinley and Quinley (1999), 23% of completer reverse transfer students worked less than two years after graduating from the university before entering the community college, 27% worked two to five years, and 50% worked more than five years.

Since 1975, a number of things have occurred that may have influenced students', particularly female students', return to college. Women have enjoyed greater access to

higher education in the United States through the easing of societal stereotypes and norms. Females attending grade school in the 1950s and early 1960s felt the obligation to sacrifice their goals to fulfill the roles of mother and homemaker expected of them. To a lesser degree, males felt obligated to provide for a family. Often this meant attending college to get a degree so they could get a high-paying job. Scheutze and Slowey (2002) described three main changes in all developed countries that have influenced postsecondary student demographics: a) increased social demand for higher education; b) diversification and marketization of higher education, which increased access; and c) changing labor market requirements, increasing professionalization and rapidly changing occupational structures. Today, few jobs do not require at least some postsecondary education. Many positions require, either formally or informally, periodic retraining, acquisition of new skills, and/or continuing education for the worker to remain effective, much less advance through the organization. With people remaining in relatively good health longer after retirement, there is a greater demand for training to begin a second or third career. All of these elements influence a student's decision to leave school, how long they remain away from education, and the decision to return.

Course load

As the community college population has increased in age, so has the life demands and responsibilities that accompany increased age. The proportion of all community college students attending part-time now exceeds 60% in many schools (Kentucky Community & Technical College System (KCTCS), 2006; Quinley & Quinley, 1998a). Because reverse transfer students tend to be older than the general community college population, and more of them have families and greater work

responsibilities (Fischer et al., 1975; Rooth, 1979; Kajstura & Keim, 1992; Harris, 1997; Townsend, 2003), it is not surprising that reverse transfer students take fewer credit hours per term. Fewer credits per term also extends the amount of time it takes for a student to complete a credential. Students traditionally took four years to complete a bachelor's degree at a university. Now measurements are taken allowing six years for completion of a bachelor's degree. Similarly, accrediting agencies require that a student have the ability to complete an associate degree in two years, but national statistics measure rate of attainment in four years.

Table 6

Course Load of Reverse Transfer Students in Previous Literature

	Fischer, Kellerman, & Odom 1975		Rooth 1979		Kajstura & Keim 1992			Quinley & Quinley 1998a	Winter & Harris 1999		
	four-year	two-year	four-year	two-year	RT	CRT	NCRT	CRT	RT	CRT	NCRT
average									8.4	5.4	9
full-time	69.2%	41.2%	90.0%	25.0%	38.0%	7.0%	50.0%				
12 or more								12.0%			
part-time					62.0%						
1/2 - 3/4-time	14.6%	33.5%									
1/4-time	14.6%	22.9%									
6-11 hrs								22.0%			
1-5 hrs								66.0%			

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

Hogan (1986) found that reverse transfer students were nearly twice as likely to be enrolled part-time. Of all reverse transfer students in the study, 66% were part-time, compared to 35% of other new students, and 87% of completer reverse transfer students

were part-time. However, in the study by Vaala (1990), male reverse transfer students carried more credit hours per term than females, and both males and females enrolled in more credit hours per term than the general student population, differing from other studies.

Credentials completed.

It is difficult to get an accurate picture of the overall educational status of reverse transfer students from the literature. Each researcher presented data in different ways, making comparison between studies difficult. They used differing definitions of reverse transfer students and different criteria for inclusion in their studies. What can be discerned is that noncompleters outnumbered completers. By definition, all of the completer reverse transfer students held bachelor's degrees. In the study by Winter and Harris (1999), almost 30% of the completer participants held two degrees before enrolling at a community college: associate's degree (3.4%), master's degree (23.6%), and professional degree (2.7%).

Despite the diversity of study approaches and definitions, the literature shows that large proportions of reverse transfer students enter the community college after completing degrees at four-year institutions. Some researchers (Townsend, 2003) examined the number of noncompleters that eventually completed a bachelor's degree, and a few (Bach et al., 1999) compared bachelor's degree attainment between reverse transfer students who completed an associate degree before transferring and those who did not. Community colleges are interested in the number of students who complete any credential at their institutions, not just associate degrees in preparation for transfer. Completer reverse transfer students already hold at least a bachelor's degree, and would

Table 7

Highest Degrees Held by Reverse Transfer Students in Previous Literature

	Rooth 1979	Ross 1982	Slark 1982	Mitchell & Grafton 1985	Hill-Brown 1989	Kajstura & Keim 1992	Harris 1997	Quinley & Quinley 1998	Windham & Perkins 2000	Pope, Turner, & Barker 2001	Townsend 2003
	RT	community college population	RT	community college population	CRT	RT	RT	CRT	community college population	RT	CRT
Reverse Transfer w/ No Degree	48.0%		32.0%	12.0%			66.9%				
Associate Degree	7.9%	6.0%	18.0%			22.0%	11.1%				
Completer Reverse Transfer					47.4%				2.2%		7.1%
Bachelor's Degree	43.6%	9.0%	49.0%		80% (13.5% with 2)		16.7%	77.0%	83.0%		
Master's Degree	3.5%	3.0%			15.0%		4.0%		16.2%		
Doctorate	0.7%	1.0%		7.6%	1.3%	7.0%	0.0%	23.0%	0.8%	23.4%	25.0%
Professional Degree					1.5%		0.5%				

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

not need to complete an associate degree, but might be interested in specialized certificates related to specific career opportunities. Community colleges have to track the number of certificates and diplomas, as well as degrees, they award to remain accredited, but they usually do not track the proportion of individual credentials they award that are earned by reverse transfer students.

Classroom environment.

Within the classroom, instructors and students face increasing age, experience, and ethnic diversity. As demonstration of effectiveness has become more important, instructors have experimented with different methods of delivering course content. The psychological functioning of older students is different from that of traditionally aged students, which leads to different modes of learning (Carney-Crompton & Tan, 2002; Justice & Dornan, 2001). Evidence exists that older students experience the classroom environment differently than traditional-age students as well (Bethune, 1977; Lambert, 1993). Several researchers (Bethune, 1977; Klein, 1990) investigated issues related to the characteristics of nontraditional students. Most reverse transfer students share these characteristics. Many of the issues relate in some way to the increased age of nontraditional students.

Community college faculty commented during interviews that reverse transfers brought a different dimension to classes. They often asked more questions, which helped to bring the whole class to consider the "whys" and "hows" of the topic at hand (Bethune, 1977). Various researchers (Klein, 1990; Quinley & Quinley, 1998a) indicated that older students, and reverse transfer students particularly, were goal oriented and practical, relevant learning motivated them. Quinley & Quinley (1998a) found that "baccalaureate

reverse transfer students are serious about their education and are more comfortable with classmates who share this orientation..." (pp. 21-27).

Justice and Dornan (2001) discovered that nontraditional-age students used higher-level cognitive study strategies more frequently. The two strategies used most often, hyperprocessing and generation of constructive information, are comprehension-focused approaches to learning in which the student seeks to understand course material. Memory abilities of the age groups were similar. The results indicated that the learning processes of nontraditional-age students might differ in important ways from those of their younger peers. The researchers suggested that faculty need to respond to the differences in motivation and learning processes by developing classes or material for students with a comprehension-focused approach to learning

With the advent of on-line course offerings and web-enhanced courses, reverse transfer students have the ability to time-shift school attendance. Theoretically, this would give students with great demands on their lives access to educational opportunities they might not have had in the past. On-line courses also make it easier for students to select courses "cafeteria-style" from several institutions at the same time. One would think that reverse transfer students would find the option of on-line and web-enhanced courses very attractive. At the same time, older students may also lack the skills and comfort level with the technology involved to feel confident enough to venture into the virtual campus. However, as the Internet and other digital means of obtaining information have become pervasive in every-day life, and time becomes more distant from computer pioneering, it is expected that the latter would be less of an issue. While there is no

literature on the rate of reverse transfer student participation in on-line and web-enhanced courses, e-learning is a topic of recent study.

Beginning with the widely held assumption that traditional and nontraditional students learn differently, Miller and Lu (2003) examined traditional and nontraditional student responses to online learning environments. Online faculty members worked to adjust the e-learning environments to accommodate learning differences to the best of their ability. The effectiveness of e-learning for adult learners depended to a great extent on the characteristics and background of the student. At-risk students, whether traditional or nontraditional, posed different challenges and concerns for online faculty.

Reverse transfer students bring a mixture of positive influences and instructional challenges to the classroom. While they usually are goal oriented, dedicated students, they often have little patience for less mature students and students who are not equally dedicated to learning. The life experiences of reverse transfer students can add different perspectives to the investigation of course material than traditional students might have. Reverse transfer students also expect a greater level of performance from the instructor and from the institution (Houser, 2002). Because they have experience at a four-year institution, they compare the community college to their previous experience.

Academic performance.

One of the major niches of community colleges is the rescue or "second chance" they afford students who have less than exemplary academic records. Many reverse transfer students were unable to succeed at the four-year institution for one reason or another. Community colleges provide opportunities for such students to gain self-confidence while repairing their academic records. Often, when they come to the

community college, they are determined to achieve academic goals and they demonstrate equal or better performance than students who began at the community college.

Decades ago, the general assumption was that academic difficulty was due to either insufficient ability or inadequate time to devote to studies. Dallam and Hoyt (1981) found that students with ACT scores below 18 seldom earned high grades, but often earned average grades. Academic loads of 15 credit hours and workloads of as much as 15 hours per week seemed to have beneficial effects. The researchers speculated that the demands on the students' time forced them to be more organized and to plan. Advice that gave students excessive free time appeared to contribute to procrastination and poor study habits. This generalization held true even for low ability students who worked.

Because of the varied reasons for reverse transfer behavior, assumptions concerning academic ability or motivation were often incorrect. In the study by Vaala (1990), all of the reverse transfer students were successful university students, and several indicated they earned above average grades. Catanzaro (1999) found that many of the enrichment reverse transfers (reverse transfer students attending the community college for personal interest) were retired or nonworking mothers. They were mature, well-educated, dedicated students who set the standard of performance in the class. Justice and Dornan (2001) found that, despite family and career demands, older students performed as well or better academically than their traditional age counterparts.

Early studies identified reverse transfers as students who left four-year institutions in academic difficulty. Despite their poor performance at the senior institution, reverse transfer students demonstrated academic ability superior to the average community college first time student. Later studies showed that reverse transfer students chose to

Table 8

Grade Point Averages for Reverse Transfer Students in Previous Literature

	Kuznik 1973		Fischer, Kellerman, & Odom 1975		G. Lee 1975		Brimm & Achilles 1976		Rooth 1979		Harris 1997			Quinley & Quinley 1998
	4 yr college	2 yr college	4 yr college	2 yr college	4 yr college	2 yr college	4 yr college	2 yr college	4 yr college	2 yr college	RT 2 yr college	NCRT 2 yr college	CRT 2 yr college	2 yr college
average	1.8	2.8			1.8	2.6	1.43	2.56			3..24	3.19	3.49	
4			2.1%	11.0%										21.0%
3.5-3.9			6.1%	25.9%	3.9%									64.0%
3.0-3.4			14.0%	27.1%										
2.5-2.9			20.1%	15.5%	16.1%									13.0%
2.0-2.4			18.3%	9.8%										
1.5-1.9			26.2%	2.7%	80.0%									1.0%
1.0-1.4														
0.5-0.9			9.8%	0.9%										1.0%
0-0.4														
A-A+									3.8%	40.5%				
A-									11.4%	14.8%				
B+									15.5%	19.3%				
B									20.5%	15.5%				
B-									11.4%	4.5%				
C+									18.9%	3.4%				
C									13.6%	1.9%				
D									4.9%	---				

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

leave four-year institutions for more pragmatic reasons. While at the community college, reverse transfer students, who entered with passing but average grades, improved their GPAs. For reverse transfer students who wished to return to the four-year institution to pursue baccalaureate or higher degrees, increased GPA gave them more confidence and renewed dedication to educational goals.

Program of study.

Reverse transfer students are not confined to purely occupational/vocational programs of study. While some researchers found that reverse transfer students changed their general area of study when they entered the community college, others found that reverse transfer students pursued areas of study similar or related to the area they studied at the four-year institution. Some researchers observed a segment of the reverse transfer student population that did not pursue a particular area of study, but sampled many diverse areas either through curiosity, personal interest, or to explore the possibility of a career in an area much different from the career they had. Students who had retired and expressed their desire to keep active and mentally fit often fell into the latter category. Hogan (1986) found that the largest proportion of reverse transfer students was listed as non-degree (38.1%), with 11% given as undecided. Transfer majors comprised 27% of responses, and 35.1% were technical majors. Over 7% of the total number of reverse transfer students planned to enter the nursing program, followed by 4.2% entering the data processing program. Most of the courses taken by reverse transfer students (52%) were designated as transfer courses. The remaining courses were classified as technical or remedial courses. The transfer courses taken most frequently by reverse transfer students were the following: English (8.6% of total reverse transfer students), math (6.1%), history

(4.8%), biology (3.9%), sociology (3.7%), accounting (3.5%), and business (3.2%). The technical areas most popular with the reverse transfer students were the following: business (9.9%), data processing (7.4%), and real estate (3.2%). Few reverse transfer students enrolled in at least one remedial course (4.6%) compared to 7.3% of the total student population and 10.6% of new students.

In the study by Vaala (1990) the programs with the largest number of reverse transfer students were business administration, nursing, and environmental science. The interviewed students indicated that their community college program of study was in a different content area than their university program. These students completed about half of the requirements for a university degree.

Catanzaro (1999) observed several types of reverse transfer students at Chattanooga Community College, each identified by their reason for attending. Technical degree reverse transfer students usually entered nursing, graphic arts, engineering technology, or similar programs that could be completed in two or fewer years. Enrichment reverse transfers often took courses in the arts, music, literature, philosophy, history, and foreign languages; subjects they glossed over or skipped when they pursued their degree. Specific skills reverse transfer students usually enrolled in courses like information science, engineering technology, and management.

In 1999, Quinley and Quinley elaborated on the reasons reverse transfer students enrolled in an urban community college. As in Catanzaro (1999), several groups emerged, based on ultimate goals. Dispelling previous assumptions in the literature, 56% of the reverse transfers majored in career programs at the four-year institution. Only 44% were liberal arts majors. The fields of study the reverse transfer students chose at the

community college were primarily in areas of technology (49%), followed by health related fields (18%), and a collection of other programs (33%).

Motivation to participate in reverse transfer behavior.

Ultimately, the motivation to participate in reverse transfer behavior drives the decision to complete a credential at the community college or not. Many researchers included questions, either open ended or forced choice, concerning why students chose to enroll in the community college after attending a four-year institution. Few, however, asked if they intended to complete a credential. The goals and intentions of reverse transfer students concerning credentials are at the heart of this study, and of greatest interest to community colleges.

Goals.

Reverse transfer students have a wide range of ultimate goals that shape their reasons for participating in reverse transfer behavior. A student who wishes to obtain a bachelor's degree may have different reasons for attending a community college than a student who wants to begin a second career or a student who wants to learn about new things.

Kuznik et al. (1974) found that despite many of the reverse transfer students leaving the four-year institution in academic difficulty, over 90% thought they had the ability to complete a bachelor's degree, and approximately two thirds indicated that they intended to do so. Curiously, only 22% intended to return to their original four-year institution. Most of the vocational/technical reverse transfer students did not plan to continue their education beyond the community college degree, but almost all of the Arts and Sciences reverse transfer students planned to complete a bachelor's degree. Sixty-

four percent indicated that they planned to return to a different four-year institution than their previous experience.

In the study by Bethune (1977), the participants all held Bachelor of Arts degrees. One participant expressed the feeling that obtaining a higher degree would not translate into any additional job opportunities, and more than one participant said that technical skills allowed them to live anywhere they wanted. Another participant discovered that the types of jobs available with the degree he had were not what he wanted to do. A technical program gave him useful knowledge and skills for changing careers.

Ross (1982) found that, of completer reverse transfers, 72% rated "get a better job" as an important reason for reverse transferring. Completer reverse transfers did not attend to gain general education or to improve reading and study skills. This is understandable since they were already successful in general education classes, as well as specific subject classes, at the four-year institution. Making more money and getting a better job were consistently important reasons for attending the community college.

In the study by Mitchell and Grafton (1985), all of the groups had similar reasons for attending the community college. The highest ranked reasons listed most often related to job training, location, the low cost of tuition, the lack of admissions requirements, and the college's reputation. While transfer preparation was listed frequently as important by noncompleter reverse transfers and first time students, when combined with other reasons in the factor analysis, it did not emerge as one of the most important reasons for any group. Completer reverse transfers listed personal growth and interest most frequently as "very important", with the other reasons related to occupational development.

Noncompleter reverse transfers listed the low cost of tuition, personal growth and occupational preparation as most important reasons for attendance.

Hogan (1986) found that the immediate educational objective of 57.1% of noncompleter reverse transfer students was to earn credits to transfer toward a four-year degree. Completer reverse transfer students gave different reasons for enrolling in the community college, including personal enrichment (36.3%), courses to obtain a job, (10.0%), and job advancement (8.8%). In the study by Vaala (1990), the students who began at the university in natural science viewed themselves as serious university students who entered the community college program to accomplish a career objective.

Kajstura and Keim (1992) found that the most important reasons given for leaving the four-year institution were (a) personal reasons, (b) financial reasons, and (c) academic difficulty. The primary educational goals at the community college were (a) complete courses for transfer (42%), (b) complete an associate degree (29%), (c) complete courses for personal interest (14%) and, (d) complete courses for professional advancement (11%). Chi square analyses showed significant differences between completers and noncompleters on the goals listed above (24.628, 12.364, 53.125, 27.812 respectively, p = .05). Noncompleters gave "complete courses for transfer" as their most important goal, while completers gave "complete courses for personal interest" as their most important goal. Approximately 50% of the reverse transfer students did not plan a change in their vocation or career, 20% planned to change occupations, and 11% were undecided. Of the completers, 74% planned no change in their vocation or career, compared to 44% of noncompleters, which was statistically significant.

Participant responses in the study by Bonham and Luckie (1993) indicated that the students who did not return attended the community college primarily for personal improvement, including improving or obtaining skills to get a job. Ninety percent expressed the desire for personal involvement and to meet interesting people as the reason for selecting the specific school.

Quinley & Quinley (1998a) found that the majority of completer reverse transfer students in their study attended community colleges primarily for career reasons, although many also attended for personal, self-enrichment reasons. Many students had multiple, linked educational goals. In a subsequent study (Quinley and Quinley, 1999), when asked to give the primary reason for enrolling in the community college, the results were similar to those of Catanzaro (1999). Three percent enrolled to discover a new career area, 10% enrolled to update skills for their current job, 8% enrolled to prepare for a secondary or supplemental job, 23% pursued personal interests, and more than half (56%) entered to prepare for a new career. Among the new career seekers, four subgroups emerged. Some indicated that they never intended to use their four-year degree for a career. Some worked for a short time after getting their four-year degree before deciding to change careers. These students wanted the ability to move anywhere and be able to find a job. Some were workers displaced from their current job by industry restructuring or bankruptcy. These students wanted job security and stability. The largest group sought new beginnings for personal reasons. Most had successful careers but took courses at the community college to prepare for a career doing the kind of work they really wanted to do.

The reverse transfer students found that getting an advanced degree did not ensure getting a better job. In many areas an advanced degree limited job prospects. The researchers predicted that multiple careers would become more commonplace. As this happens workers will need to intersperse their working lifetime with periods of academic enrollment to prepare for new careers.

In the study by Bach et al. (1999), the opportunity group comprised approximately one third of the students and did not demonstrate any academic distress. These students attended the community college to supplement their university work by taking developmental and prerequisite courses. This group also had three subgroups. The first subgroup used the community college to fill in university work. Approximately 70% of these students completed a bachelor's degree.

Catanzaro (1999) found that special purpose undergraduate reverse transfer students enrolled to fulfill special needs. They enrolled in courses they needed for their program at the four-year institution but that were not offered at convenient times. They enrolled to reduce the overall tuition costs of their degree, because they believed community college courses were easier, or because the grades from the community college would not be reflected on the university transcript and would not affect their university GPA. They also enrolled to avoid certain faculty at the university, to follow friends, or because of "inside information" that this is the way to go. Typically, special purpose undergraduate reverse transfers took only a few courses in one or two terms and did not return since their goal was met. Enrichment reverse transfer students had four-year degrees and enrolled for enrichment or a specific personal objective. Often they returned after a long lag time. Frequently they were long-term students, initially enrolling

for a continuing education program. They migrated to credit courses for more depth of knowledge and intellectual challenge. Technical degree reverse transfer students perceived that the jobs requiring technical degrees paid well, were available in any community, and provided job security. Often, but not always, these students possessed a four-year degree. Their four-year degree was usually in an area perceived difficult to place, did not pay well, or the student discovered that a graduate degree was necessary to meet their career goal. Specific skills reverse transfers were students with four-year degrees that needed specific job-related skills offered at the community college. They were, or were soon to be, promoted to a supervisory position and encountered an obstacle to career development. This obstacle could be overcome by short-term, focused exposure to a specific set of courses that would give them needed knowledge and state-of-the-art workplace applications. The largest group of students was the transient reverse transfers. These students often did not have a four-year degree but had a history of intermittent attendance at one to several institutions in several settings. Enrollment choices were made on comparative cost, proximity, and accessibility instead of a clear academic or career path. Their mobility was usually related to their spouse's occupation or the perception that the value of higher education was not in the traditional curriculum. They usually were in their 20s and did not feel that formal academic plans were necessary or relevant.

Hagedorn and Castro (1999) observed a difference in goals related to age. Young reverse transfers intended to transfer back to the university and complete a degree. Older reverse transfers, especially those with several years' hiatus since attending the four-year

institution, tended to enroll in vocational programs and did not intend to transfer to the university.

Quinley and Quinley (2000) expanded on their earlier study, investigating the reasons completer reverse transfer students chose to enroll in the community college. The researchers speculated that the increase in completer reverse transfers at the study community college was due, in large part, to the restructuring of the American economy. Jobs in the middle-level management sector usually required a bachelor's degree, but many corporations greatly reduced the number of jobs in this area. The displaced workers looked to jobs in growing areas, such as technical and health-related fields, for more job security. Technical and health-related jobs typically required more than a high school diploma, but less than a four-year degree. These students possessed strong academic credentials and firm career aspirations.

Quinley and Quinley identified four groups of completer reverse transfer students. The "Explorer" reverse transfer student enrolled to explore different curricula to choose a new career area. The "Personal Enrichment" reverse transfer student took courses on a continuing basis, usually in the arts, that had no link to current or future career plans. This group comprised approximately 25% of completer reverse transfers. "Career and Skills Update" reverse transfer students enrolled in the community college to update skills necessary for success in a current job as the scope and technology changed. "Supplemental Income Seeker" reverse transfer students comprised approximately 10% of completer reverse transfers. These students enrolled to gain skills in an area secondary to their principal job. "New Career Seeker" reverse transfer students comprised 56% of completer reverse transfers. These students enrolled primarily to prepare for a career

change. Within this group the researchers identified four subgroups: a) individuals who never intended to use their four-year degree to secure employment, b) individuals who worked a short time before returning to school, c) individuals displaced from their job by external forces, and d) individuals who sought to change careers for personal reasons. The last subgroup comprised almost 20% of reverse transfers.

Voorhees and Zhou (2000) conducted a statewide survey of student intentions. The survey collected data on perceptions of goal attainment and reported intention shifts among students attending community colleges in the fall of 1995. The researchers suggested that there were fundamental differences between four-year institution students and community college students. These differences included academic ability, ethnicity, and previous academic success. While statistical techniques could control these differences, they could not control factors such as goals and intentions.

Critical life events or reassessment of goals and priorities often triggered the decision to return. Nontraditional students were also more likely to attend for intrinsic reasons (Justice & Dornan, 2001). Consistently, throughout the history of reverse transfer studies, reverse transfer students enrolled in the community college for primarily job-related reasons. Early studies documented the function of community colleges in repairing or strengthening the academic careers of students in academic difficulty. The emphasis of reverse transfer shifted from remediation and academic career salvage to job retraining, personal interest, and financial conservation in the early 1980s. Even students interested in transferring to pursue a bachelor's degree re-aligned their programs of study at the community college to reflect more realistic educational goals. Students developed a more "consumeristic" view of educational services (Lum, 2007). Reverse transfer is

Table 9

Educational Goals of Reverse Transfer Students in Previous Literature

	Kuznik, Maxey, & Anderson 1974		Rooth 1979	Drakulich & Karlen 1980	Slark 1982	Hill-Brown 1989				Harris 1997			Windham & Perkins 2000	Townsend 2003
	arts & sciences RT	vocational / technical RT	RT	RT	RT	overall RT	immediate RT	delayed RT	CRT	RT	NCRT	CRT	CRT	CRT
none			36.0%	3.4%	46.0%	54.0%	44.0%	36.0%	78.0%	3.6%	61.3%	38.7%	93.0%	
certificate/ diploma				1.1%		4.0%	1.0%	5.0%	4.0%	4.6%	70.7%	29.3%	4.0%	
associate/ transfer degree		61.0%	62.0%	25.0%	19.0%	21.0%	29.0%	30.5%	2.0%	39.9%	88.6%	11.4%	3.0%	20.9%
associate of applied science				23.8%		4.0%	4.0%	7.0%	6.0%					
bachelor's degree	95.0%			18.1%		25.0%	33.0%	38.0%	8.0%	58.6%	94.8%	5.2%		
master's degree				15.9%					38.0%	32.8%	79.3%	20.7%		
doctorate				10.2%						6.2%	81.8%	18.2%		
professional degree										4.6%	38.0%	7.3%		
vocational					35.0%									
other				2.2%										
met goals											39.5%	60.5%		
no response						17.0%	22.0%	21.0%	10.0%					

Note: RT = Reverse Transfer; NCRT = Noncompleter Reverse Transfer; CRT = Completer Reverse Transfer

individualistic. The perceived differences between two-year and four-year institutions related more to size of the institution, age of the student, and residency than to the level of programs These themes are recurrent throughout the literature.

Choice of institution.

Many of the educational goals expressed by reverse transfer students could be accomplished at either a community college or a four-year institution. Why, then, do reverse transfer students choose to attend a community college? A large proportion of reverse transfer students were not in academic difficulty when they left the four-year institution, and many successfully completed baccalaureate or graduate degrees.

In the study by Hogan (1986) both groups of reverse transfer students cited convenient location most often as the primary reason for enrolling in the community college (72.1% for completers, 65.8% for noncompleters). Completer reverse transfer students next chose the community college because of specific classes (62.8%) and the ability to continue working (53.5%). Noncompleter reverse transfer students cited low cost (59.8%), the ability to continue to work (53.1%), and specific courses (48.3%) as reasons they chose to attend the community college. If the community college was not available, 47.4% of completer reverse transfer students would not have returned to college. Twenty-four percent of noncompleter reverse transfer students reported that they were unable to attend college if the community college was not available. Their alternate choices were a public four-year college (43.0%) or a private college (20.9%), but not a vocational school. Of other new students, 22.2% reported they were not able to attend college if the community college was not available. Their alternate choices were a public four-year institution (47.0%) or a vocational school (14.7%).

Few of the reverse transfer students in the study by Hill-Brown (1989) transferred for academic poor performance. The most common reasons for transferring before the completion of a degree were the lower cost of the community college, greater convenience, and better scheduling of the community college classes.

The reasons given for enrolling in a two-year institution in the study by Kajstura and Keim (1992) were (a) close to home, (b) low tuition, and (c) convenient class times. A *t*-test showed a statistical difference between completers and noncompleters for low tuition, quality of instruction, GPA improvement, and relatives'/friends' advice. In all of these categories, noncompleters had higher scores.

Hagedorn and Castro (1999) found that students left the four-year institutions for a variety of emotional reasons. Some left because they were homesick, immature, or used various substances irresponsibly. Some students left the four-year institutions for academic reasons. Students reported that they had a hard time keeping up in the four-year institution. They left before admitting defeat or experiencing the disgrace of failure. Students needing remedial coursework usually also had a related emotional reason for leaving. The community college enabled them to increase their self-confidence and to mature enough to return to the university.

Problems at the four-year institution related to homesickness, immaturity, or substance abuse were especially prevalent among minority students. An initiative to increase the minority segment of the university population led to larger groups of African Americans and Hispanics enrolling in the four-year institutions. These students reported leaving because they felt out of place. They wanted to be in more familiar surroundings,

and close to their support systems. The community colleges allowed them to pursue postsecondary education closer to home (Hagedorn, & Castro, 1999).

Townsend (2003) conducted a study focused on degree-seeking baccalaureate-degree holders at a two-year technical institute. The majority (62%) of the sample indicated "preparation for career change" as a primary reason for choosing the technical college. Ninety-five percent indicated, "good job opportunities existed" at the technical college as compared to 45% at the four-year institution. The top three reasons selected for enrolling at the technical institute were "field of study" (79%), "academic reputation of program in which enrolled" (47%), and "convenience of scheduled courses" (44%). Twenty-six percent wrote in responses that alluded to the degree's job potential, real-world experience, and the hands-on approach of the curriculum.

Location was the dominant factor in choice of institution. Another important factor was whether it offered the program they wanted. The respondents expressed the perception that the two-year college offered a "more up-to-date" program at a lower cost than did the four-year institution. Most of the students wanted to enter/re-enter the job market quickly and felt that the two-year college offered more hands-on experience. The respondents indicated that their experience at the four-year institution gave them "cultural capital" necessary for social success through the general education courses and extracurricular activities. They gained the ability to think in theoretical terms.

Satisfaction.

Making the assumption that a student's satisfaction with his or her educational experience influences their overall performance, a number of researchers asked questions

concerning the students' perceptions of both the four-year and the two-year institutional experiences.

Kuznik et al. (1974) found that only about one fourth of the Arts and Sciences majors and none of the vocational/technical reverse transfers would have remained at the four-year institution if they had better loan or scholarship assistance. A possible reason for reverse transfer, as indicated by responses, may have been the lack of personalization at the four-year institution. Ninety percent of respondents indicated they received little or no help from counseling facilities at the four-year institution. More than 95% received little or no help from the student affairs office while at the four-year institution and while deciding to transfer. Forty-eight percent indicated that no one helped with their decision to enroll at the two-year institution. Both groups reported that low tuition and proximity of the school were important factors in the decision to enroll in the two-year institution. Sixty-one percent of respondents were more satisfied with their two-year institution than the four-year institution. Reverse transfers rated two-year institution instructors higher in ability to stimulate thinking and make subjects interesting than four-year instructors. Four-year instructors received higher rankings for knowledge of subject matter.

This and other early studies indicated that the lack of personal attention at the four-year institution contributed substantially to the reverse transfer student's decision to transfer. It is possible that reverse transfer students, at least early in reverse transfer history, were individuals that were psychologically or functionally dependent on attention from the institution. They may not have been adept at seeking academic and/or financial assistance. Since the proximity of the two-year institution was a significant factor in the decision to attend, it could be that the reverse transfer student's experience at the four-

year institution was the individual's first away from home, familiar surroundings, and their established support system. Many of these students may have been more successful if they had begun their postsecondary education career at the two-year college (Kuznik et al., 1974).

In the study by Brim & Achilles (1976), participants indicated that they had a renewed interest in obtaining a bachelors degree while attending the community college. They also stated that upper division teachers were more interested in the subject matter and the students, and that the upper level courses were more interesting since they pertained to their vocational interests. Over one third (36%) indicated that, if they had to begin college again, they would begin at the community college.

In the study by Slark (1982), the reasons for leaving the four-year institution varied. Forty-one percent, most of which were vocational students, indicated they left the four-year institution because they completed a degree. Eleven percent left because they moved, and 10% left because the four-year institution was too costly or they did not qualify for sufficient financial aid. Four percent left in academic difficulty or because the course work was too difficult. Most of the reverse transfer students who attended out-of-country institutions came to the community college to learn English. Seven percent were classified as "expediter" students (students attending the community and four-year institution at the same time to expedite their academic progress).

In the study by Mitchell and Grafton (1985), the reasons given for leaving the four-year institution and attending the community college often related to changes in personal or work situations, rather than academic concerns. Completer reverse transfer students reported academic indecision, the high cost of tuition, and items that were

critical of the four-year institution as the primary reasons for leaving. Noncompleter reverse transfer students left because of undecided majors or changed educational goals. They also cited cost and criticisms of the institution as reasons for leaving. The study indicated that reverse transfer students attended the community college because of its characteristics, not for the transfer function.

In the study by Hill-Brown (1989), students gave dissatisfaction with the four-year school in a variety of areas, and personal problems as reasons for attending the community college. The reverse transfer students expressed satisfaction with the community college experience, although students who had completed degrees before attending the community college still preferred the four-year institution. A significant proportion intended to return to a four-year college to earn degrees, some at the graduate level.

In the study by Vaala (1990), about equal numbers of the participants indicated they "liked" and "not liked" their university experiences. Among the group that liked their university experience, the manner in which community college courses were organized and delivered tended to cause some frustration. The students expressed approval of the community college courses, instructors, and programs. The students indicated that community college faculty members provided encouragement and support. Some students also indicated they derived encouragement and support from other students.

Quinley and Quinley (1998) found that completer reverse transfers were satisfied with their community college instruction, and they were more comfortable with classmates who shared a dedication to their education. Completer reverse transfers felt

their community college experience was successful, and they suggested that the community college's programs and services were valuable to them.

Nontraditional students hold high expectations for teacher performance. Houser (2002) investigated instructor communication expectations of nontraditional students compared to traditional students. Nontraditional students indicated they expected to learn at all times and had low tolerance for discussions with individuals or the class on topics unrelated to the subject of the course. This lack of tolerance may be due to greater life experience of the older student, or greater impatience to achieve their goals.

In the study by Townsend (2003), students were more pleased with their two-year college education and training, but gave low satisfaction scores to non-classroom activities. Most of the respondents chose to return to college to prepare for a career change or advancement in their current employment field.

The literature reveals that reverse transfer students leave the four-year institution for a variety of reasons, and they are generally satisfied with their educational experience at the community college. The factors that appear to weigh heaviest in the choice to attend a community college are related more to the characteristics of the school than the level of the academics or the programs offered. The question of whether reverse transfer students are predisposed to the behavior due to personality characteristics and preferences will have to wait for another investigation.

Intent to complete a credential.

Keeping in mind that less than 10% of all community college students enroll with the intention of earning an associate degree, either to transfer or as a terminal credential (Palmer, 1990), reverse transfer students comprise about a fifth of the student population,

and approximately three-quarters of those do not have a bachelor's degree, the number of students that intend to complete an associate degree at any time is a small proportion of the student population. Because reverse transfer students comprise a substantial proportion of community college student populations, approximately 20%, attendance and performance characteristics of this group can influence institutional outcomes. With government resources tied increasingly to outcomes and effectiveness measures, the implications of the presence of this group can be significant.

Of all the data collected by institutions on their students, the one datum of most interest is credential completion rate. This is the piece of information that funding decision-makers and accrediting agencies can use to easily determine if an institution is improving, declining, or holding steady. As explained in earlier sections, many factors influence a student's decision to leave school, return to school, educational goals, and the path the student will take to accomplish those goals. Educational goals do not always include completing a credential. If institutions were able to predict which students were more likely to complete credentials, priority could be given to retention of those students that exhibit the characteristics. Institutions could also address areas where students "fall through the cracks". Few researchers have investigated the intentions of reverse transfer students at the community college.

Hogan (1986) found that, ultimately, 38% of completer reverse transfer students, 21.7% of native students, and 25.4% of noncompleter reverse transfer students intended to obtain a degree. Noncompleter reverse transfer students and native students showed more interest in earning an associate degree than completer reverse transfer students. The

exception was students enrolled in programs leading to jobs that required a degree to take the licensure examination, such as nursing.

Voorhees and Zhou (2000) conducted a statewide study of student intentions. They found that a large proportion of students who enter community colleges do not intend to earn a degree or to transfer. All of the participants indicated they fully expected to complete their community college program, but few said they were strongly committed to finishing their original university program. Catanzaro (1999) found that, of the five groups in his study, only one pursued a specific credential. The largest group of reverse transfers attended with no plan or goal other than to take courses of interest. In the study by Quinley and Quinley (1999), 47% enrolled with the intention to obtain a degree, 46% did not intend to earn a degree, and 8% were undecided.

The studies outlined above show that a large proportion, if not a majority, of the reverse transfer students enter the community college without the intention of completing a degree. Little research exists that examines the possible intentions of reverse transfer students to complete shorter term credentials, such as certificates, that do not imply the intention to eventually complete a bachelor's degree or higher. Because many of the reverse transfer students in some studies do not anticipate transferring credits from the four-year institution, and do not plan on pursuing a bachelor's degree, certificates might be the credentials completed.

Implications for community colleges.

Admissions policies in the early days of reverse transfer research were based on assumptions about transfer student behavior and abilities. While these assumptions were effective in predicting the performance of transfer students from other community

colleges, many of these assumptions proved to be incorrect with respect to reverse transfer students. Effectiveness measures based on program completion assumed a traditional model of linear progression from high school to community college to university. Not only did reverse transfer students not fit this profile by definition, they held educational goals that did not conform to the established effectiveness measures.

Muck and Undem (1966) found no evidence to support policies requiring reduced course load or a forced waiting period before enrolling for students reverse transferring. Meadows and Ingle (1968) evaluated the criteria community colleges used to admit academically deficient students. They found that, since many reverse transfer students came from prestigious senior colleges, they possessed better academic aptitude than first time community college students. Reverse transfer students had higher SAT scores than community college students, and increased their GPAs by an average of .89 points while at the community college. Academically deficient transfer students from other two-year colleges were not as successful as the reverse transfers, and had a failure rate of 64%.

Meadows and Ingle (1968) speculated that being admitted on probation might be a motivating factor, especially when accompanied by counseling. The community college was usually smaller and more personal than the four-year institution, and often emphasized counseling and personnel services. Adjustment of educational and career plans to align better with the student's aptitudes and interests accompanied the change in college. Prior experience equipped reverse transfers better for academic survival. The researchers concluded that the use of the indicators used for first time community college students were better indicators of expected community college performance of reverse transfers than the student's performance at the previous institution.

The issues community college administrators face concerning which student groups to assign priority surfaced in a study conducted by Lambert (1994). The researcher interviewed reverse transfer students who held bachelor degrees or higher and faculty and administrators at two community colleges to determine the impact of completer reverse transfers on the institutions. The study found that, while the impact of completer reverse transfer enrollment varied with each institution, administrators predicted that eventually all community colleges will face decisions concerning reverse transfer students in selective admission programs. Reverse transfer students, and particularly completer reverse transfers, seek out career preparatory programs that lead to credentials in areas of great demand and that offer high paying jobs. These areas tend to be allied health and technology-based occupational careers. At most community colleges, these programs have limited slots available and selective admission requirements. Students with previous college experience, and especially those who already possess a degree, have a marked advantage in a competitive admissions situation over first time college students.

Some of the administrator participants felt that the missions of their school conflicted in the area of selective admission to programs. One school had the major education purpose of meeting the varied education needs of citizens in the community, of which completer reverse transfers are a part. It also had a major social service purpose of correcting extant societal inequities through education.

Catanzaro (1999) contended that the niche of offering courses for personal interest and allowing attendance without working toward a credential, which the community college fills, is still important in that it provides businesses with an

intellectually fit workforce. These students, however, did not fit the traditional student profile of community college students. The importance of these students to the community college was revealed by a series of events that took place in California.

Hagedorn and Castro (1999) outlined the effects of these events on the state community college system. The Master Plan of 1960 established a three tier educational plan in which the bottom 55% of California residents qualified for free community college tuition. A series of economic events, including a severe statewide recession, led the community college system to the verge of bankruptcy. To address the funding shortfalls, the state decided in 1994 to impose a $50 per credit fee on any community college student who possessed a four-year degree. Legislators assumed that the reverse transfers in the 106 community colleges were "rich housewives who wanted to study French so they could converse with waiters on their next European vacations" (Trombley, 1993, p. 2). The result was a drop in total community college enrollment of almost 10%. Approximately 41% of bachelor's degree holders dropped out. As a result, the legislature reversed the bill in 1996.

Interviews with reverse transfer students revealed that they felt the policy discriminated against them or punished them for obtaining a degree. Reverse transfer students attended to update skills for the workplace or to gain skills to enter the workforce. Many saw that their four-year degree became obsolescent quickly and they needed to update information and skills. Divorcees needed quick preparation for jobs that paid enough to support themselves and their children. The recession in the early 1990s was responsible for many students at the universities having to leave for financial reasons. Many continued their education in the cheaper community colleges.

Winter and Harris (1999) proposed some implications stemming from their study. Reverse transfer students need services and programs designed for students who work and/or have families. Because of outside responsibilities, individuals spend a minimal amount of time on campus. Student orientation and information programs should accommodate these students. The data concerning participants' reasons for initial enrollment at a community college coincides with the traditional community college mission to serve place-bound students with limited financial resources as well as students looking for focused, applied instruction for career advancement. The data suggested that reverse transfer students possess the desire and ability to attain their academic goals. Recruitment of this student group may have a positive impact on retention and program completion rates with minimal stress on existing advising resources.

LaPez (2005) examined the effectiveness of measurement policies with regard to graduation rates and transfer students. The author posed the questions "why are more students not completing their degrees within the traditional four- to six- year timeframe" and "why has higher education not done more to improve graduation rates".

Reverse Transfer Research in Kentucky

Kentucky provides a unique opportunity to examine the reverse transfer phenomenon. First, previous studies of reverse transfer students in the community college system were similar enough to allow meaningful comparison of data, especially demographic characteristics. Second, research of reverse transfer students conducted in 1996 provided thorough statistical analyses not found in other locations. Finally, the Kentucky postsecondary education systems underwent well-documented, extensive reform in 1997, just after the last studies were conducted. The previous examinations of

reverse transfer students occurred at approximately 10-year intervals, similar to the timing of the current study. These elements provided a foundation for the design of this study.

Hogan (1986) examined the new student surveys of 11,803 newly enrolled students in 13 two-year colleges in Kentucky. Of the entering students, 2,673 (22.6%) identified their last institution of attendance as a baccalaureate-granting institution. The researcher had the counseling staff administer a survey to new students during a required orientation session. Students who did not pre-register, and hence did not attend an orientation session, were not included in the group who received the survey.

Hogan (1986) found that 92.3% of reverse transfer students in Kentucky community colleges were White, compared with 90.5% of the other new students. African American students comprised 6.6% of reverse transfer students compared to 7.9% of other new students, and 1.1% of reverse transfer students were "other", compared to 1.5% of other new students.

Ten years later Harris (1997) found that the reverse transfer population in Kentucky had become slightly more diverse (Table 10). Of all reverse transfer students, 88.2% were White, 8.8% were African American, 1.3% was Asian American, 0.8% were Hispanic American, and 0.9% were Native American. Harris performed a χ^2 analysis to determine if there was an association between ethnicity and reverse transfer status. The results were $\chi^2 (4, N = 873) = 12.75, p < .05$, indicating that there was a significant relationship between ethnicity and reverse transfer status. He also found that 38.1% of all responding reverse transfer students were married and 51.7% had never been married.

Table 10

Demographic Characteristics of Reverse Transfer Students in Previous Kentucky Studies

Characteristic	Hogan	Harris
Gender		
Male	41.6%	33.6%
Female	58.40%	66.4%
Age		
≤ 25	50.60%	34.1%
> 25	49.40%	65.9%
Ethnicity		
White	92.30%	88.1%
African American	6.60%	8.9%
Other	1.10%	3.0%
Marital Status		
Single		
Married	38.3%	38.1%
Divorced	13.0%	7.6%
Employment Status		
Full-Time	43.70%	47.5%
Part-Time	22.20%	31.9%
Enrollment Status		
Full-Time	34.00%	37.1%
Part-Time	66.00%	62.8%

Winter and Harris (1999) examined the demographic and academic characteristics of reverse transfer students. The researchers adopted the definition of reverse transfer students put forth by Kajstura and Keim (1992). The objectives for the study were twofold. The first objective was to develop a descriptive profile of completer and noncompleter reverse transfer students. The second objective was to develop reliable data that could generalize to larger populations. The researchers had three research questions: "(a) What are the characteristics of reverse transfers within the focal population? (b) What are the reasons for initial enrollment and current goals that motivate reverse transfers to attend community colleges?; and (c) How do completer and noncompleter

reverse transfers differ with respect to their characteristics and with respect to their initial reasons for enrollment and current goals for attending a community college?"

The authors used the data collected by Harris' (1997) survey for their analysis. Harris (1997) used an existing student services model, the Services, Programs, Advocacy, Research (SPAR) Model developed by Jacoby and Girrell (1981), as the framework for his study. The survey instrument was a modified version of a questionnaire developed by the California Association of Community Colleges' Commission on Instruction and Research and Development. The instrument used in the study contained 54 items in four categories: (a) student characteristics; (b) college experiences; (c) reasons for initial community college enrollment; and (d) current goals. The rating system had five-point Likert-type scales with two scale anchors (1 = *Not at all important*, 5 = *Extremely important*).

The researchers conducted a pilot test to check validity. The pilot group participants ($N = 35$) were similar to the study participants, and completed the survey twice at a two-week interval. The mean item coefficients of stability for the subsections of the survey and for all items on the instrument ranged from .82 to .99, which indicated excellent by-item and test-retest reliability.

The research plan required a minimal survey response rate and a minimal sample size to ensure sufficient statistical power. Previous research suggested that completer reverse transfers numbered approximately 12% compared to noncompleter numbers. A power analysis (Gall et al., 1986) yielded minimal sample sizes of 100 completer reverse transfers and 733 noncompleter reverse transfers. Combining these figures with the standard acceptable response rate of 60%, as established by Dillman (1978), the required

mailing was 1,389 surveys. The participants for this study were reverse transfer students enrolled for credit at 14 community colleges that comprised the University of Kentucky Community College System. Eleven percent of the Kentucky community college student population were reverse transfer students. The sample contained two subgroups: noncompleter reverse transfers (n = 734) and completer (defined as having completed a bachelor's degree) reverse transfers (n = 148). The researchers drew recipients of the surveys at random from the list of all reverse transfers in the Community College System population.

The researchers used χ^2 tests to analyze the relationships between the nominally scaled variables. Independent sample t tests were used to discover significant differences between completer and noncompleter groups. The researchers used Pearson product-moment correlations to assess associations between interval scaled variables, such as age and credit hours. The researchers used Point-biserial correlations to examine relationships between naturally dichotomous variables (i.e. reverse transfer status) and interval scaled variables (i.e. age).

By definition, all of the completer reverse transfer students had bachelor's degrees. Almost 30% of the completer participants held two degrees before enrolling at a community college: associate's degree (3.4%), master's degree (23.6%), and professional degree (2.7%).

The profile of reverse transfer students that emerged from the data analysis conformed to the nontraditional student profile. The study participants were older than traditional students, had an average of one dependent child, were predominantly female, and white. Many were married and most were working while attending college.

Academically, the study participants were high performers. The data indicates that reverse transfer students are highly job/career-focused, which is another area of traditional community college strength.

Winter and Harris (1999) assessed the instrument for reliability and the subsequent study (Winter, Harris, & Ziegler, 2001) confirmed construct validity for the same instrument. Factor analysis resulted in a three-factor solution that explained 43.6% of the variance in the 23 variables. The discriminant analysis revealed that the eight significant predictor variables accounted for 31.1% of the variance of the reverse transfer status.

Subsequently, Winter et al. (2001) conducted a study to determine construct-validity of the instrument used in the previous study to gather data about the reasons reverse transfer occurs. The second objective of the study was to analyze the data from the previous study (Winter & Harris, 1999) using a multivariate approach. The researchers used stepwise discriminate analysis to identify predictor variables that differentiate between completer and noncompleter reverse transfer subgroups. It was the researchers' intention to add to existing knowledge about reverse transfer students to "(a) inform student recruitment initiatives and (b) provide information to support administrators and faculty members who design student services and academic programs." (Winter et al., 2001, p. 273).

The analysis of the data from the earlier study (Winter & Harris, 1999) revealed that age is the only significant discriminator between completers and noncompleters. The analysis in this study revealed more differences. Noncompleters gave the greatest importance to completing an associate's degree, improving basic skills, completing

courses for transfer, and improving grade point average. Completers placed more importance on acquiring skills for career change, obtaining training related to current job, and attending a college close to work. Completers were significantly older (37.4 years) than noncompleters (29.3 years).

The data suggested that both subgroups of reverse transfer students are worthy of recruitment efforts since they have high grade point averages, despite many outside responsibilities. Programs aimed at noncompleters should emphasize earning an associate's degree, improving basic skills and transferring to obtain a baccalaureate degree. Programs that target completers should emphasize skill acquisition for career change, training application for current employment, and the convenience aspects of the community college.

Summary

The literature describes reverse transfer students as individuals older than the traditional community college student, usually White, and most are female. A large portion of reverse transfer students is married, and many have at least one dependent child. These students usually have numerous responsibilities outside of school, which limit the number of courses to one or two per term. Most work full time, and attend the community college for reasons connected to their career or to develop a new career. Despite many demands on their time, reverse transfer students usually perform as well or better than their traditional counterparts. Reverse transfer students are usually dedicated to their educational goals, and often make substantial sacrifices to achieve them.

In the classroom, reverse transfer students want to understand topics rather than just know the material. They often ask more and more in-depth questions as to the

"whys" and "hows" of the topic. Some studies found that reverse transfer students have little tolerance for discussions that deviate from the subject and they expect to be learning at all times. Other studies, however, reported that they set the standard for class performance, and they elevated the level of class discussions.

The greater expectations present challenges for teachers in the classroom, and for student services in institution administration. Reverse transfer students have attended four-year institutions, and use their previous experiences as the standard against which they measure the community college. Many reverse transfer students express general dissatisfaction with the impersonal atmosphere at the four-year institutions, and greater satisfaction with the personal attention at the community college. Some said that if they were to start their postsecondary career over, they would start at the community college. The four-year institution is still valuable for the depth and theory of academic topics, but the community college excels in practical experience and career applicability.

The hands-on approach to topics draws reverse transfer students to programs that prepare students for high paying, technical or health related careers. Since many of these programs have selective enrollment, community colleges are faced with new challenges. The dual missions of the community college are workforce development and educational service for underserved populations. Reverse transfer students are academically advantaged, compared to traditional community college students, since they have secured admission to four-year institutions before enrolling in the community college. The majority of reverse transfer students did not leave the four-year institution in academic difficulty, so they were successful students. As part of the community, community college policy pits the reverse transfer students against the native community college

students in competing for the limited slots in selective programs. Minority students and students from underserved and disadvantaged populations are usually the students displaced by reverse transfer students in these selective programs. Community colleges now wonder if they need to weight or otherwise alter the selection process to limit the number of academically advantaged students in the programs that can provide a step up the socioeconomic ladder to disadvantaged students.

Adopting the role of social engineer can come with consequences if reverse transfer students show program completion rates higher than native community college students. Since program completion rates are among the primary effectiveness measures used to determine government funding levels, community colleges are interested in attracting students committed to completing programs, whether they are selective or open admission. Successful four-year institution students, especially those who have completed degrees, enrolled in the community college also elevate the prestige and image of the community college. This can help to attract other students of similar abilities. All of these issues take on increased importance as institutional effectiveness measures increase in importance.

CHAPTER III

METHOD

This study is based upon the self-reported data collected by a survey administered to students attending courses at Jefferson Community & Technical College and Elizabethtown Community & Technical College in the fall term of 2008 and spring term of 2009. This chapter is organized according to the following topics: (a) statement of purpose; (b) study context; (c) conceptual framework; (d) research design; (e) data analysis; and (f) study limitations.

Statement of Purpose

Research in the area of reverse transfer students is relatively scant. Most of the literature that exists report findings from descriptive studies in single institutions, single districts, or single states. A few researchers conducted qualitative surveys (Hill-Brown, 1989; Lambert, 1994). Few empirical analyses of data (Basile, 2004; Harris, 1997; Hillman et al., 2008; Winter & Harris, 1999; Winter et al., 2001) exist in the literature. Very few studies examined the behavior or intentions of reverse transfer students while at the community college. The purpose of this study is to examine reverse transfer student demographic variables, the motivations for reverse transfer behavior, and the implications this behavior has for completion rates at the community college. This study focused on the predictive potential of factors identified from the literature specific to community college program completion. A primary implication of this study may be to possibly

inform the formation of legislative and institutional policy. The research questions that will guide this study are as follows:

1. What are the current demographic characteristics of reverse transfer students?
2. What are the current motivations for reverse transfer behavior?
3. After controlling for select demographic variables (i.e. gender, ethnicity, marital status, dependent children, age, and employment status), to what degree do motivations for reverse transfer behavior predict program completion at the community college?

Study Context

Examination of education goals of current reverse transfer students in Kentucky provides a foundation for a discussion of legislative policies. This study examined the motivations for reverse transfer behavior and the demographic characteristics of reverse transfer students that predict community college program completion. Throughout the literature, researchers identified the need for further study of the diverse group of students with previous college experience. A number of factors influenced the selection of Kentucky Community and Technical College System (KCTCS) as the location for the study.

First, in the absence of a longitudinal national study, short-term localized studies provide useful profiles of reverse transfer students. Successive studies conducted in California (Baratta, 1992; Mitchell & Grafton, 1985; Renkiewicz et al., 1982; Slark, 1982), Virginia (R. Ross, 1982; Klepper, 1990), and Florida (Florida Atlantic University, 1999; Windham & Perkins, 2000) were not similar enough to make meaningful comparisons within the respective state systems. National longitudinal studies conducted

by the U.S. Department of Education did not examine any student population group at great depth. Studies of reverse transfer students in Kentucky have been conducted at approximately 10-year intervals, with this study being the third. Hogan (1986) performed a study that was very general and included limited analyses of various categorical variables. Analytical studies of reverse transfer students exist (Harris, 1997; Winter & Harris, 1999; Winter et al., 2001) that provide a historical foundation for reference. Second, substantial changes have taken place in the community college system since the above research was conducted with the adoption of the Kentucky Postsecondary Education Improvement Act in 1997.

This study will attempt to extend previous research concerning reverse transfer students. Hogan (1986) examined reverse transfer students in 13 community colleges in Kentucky (measuring the number of reverse transfer students, ethnicity, gender, age, employment, occupation, courses, academic performance, marital status, socioeconomic background, family college experience, goals, special needs). Harris (1997) conducted a study of the reverse transfer students in the University of Kentucky Community College System consisting of 14 community colleges. Harris compared completer and noncompleter reverse transfer students on age, gender, ethnicity, number of dependent children, number of hours enrolled, number of hours completed, GPA, reason for enrolling in the community college, and career goals. This study examined additional variables, focusing on the prediction of program completion at the community college.

Postsecondary education in Kentucky underwent extensive changes in 1997 with the passage of the Kentucky Postsecondary Education Improvement Act (Kentucky Postsecondary Education, 1997). The main points of the Act were to provide "seamless"

education, the ability to move within the state system with few obstacles, the concept of P-16 education, and emphasis on measurable outcomes at every level. The Act removed all but one of the community colleges from the jurisdiction of the University of Kentucky, and removed the 13 technical colleges from the Cabinet for Workforce Development. The colleges combined to make the Kentucky Community and Technical College System (KCTCS), a state postsecondary system governed by a single Board of Regents, and independent of the public four-year institutions. This consolidation resulted in 16 districts and more than 50 campuses. In 2005, KCTCS absorbed the remaining community college, Lexington Community College. As of the fall semester of 2005, KCTCS enrolled 84,931 students in 600 programs at 16 colleges and 65 campuses (KCTCS, 2006).

The new system combined the population of community college students, with a large proportion focused on transfer, and the population of technical college students, who were primarily focused on quick transition to the workplace. As with most community colleges, the student population contained students taking courses for personal interest, and a substantial number of students who were the first in their family to attend college. Researchers have not investigated how the merger of the two student bodies has affected the reverse transfer student profile. The current student population of KCTCS contains a much larger proportion of technical students than the populations examined by Hogan (1986) and Harris (1997). As discussed in the literature (Bethune, 1977; McCormick, 2003), completer reverse transfer students often return to the community college to gain specific skills to complement their formal degree, or train for

careers that are easily portable. How many of these students complete programs at the community college?

Conceptual Framework

Determining whether a reverse transfer student will complete a program of study involves the combination of a number of variables. Various studies (E. Anderson & Darkenwald, 1979; Kearney et al., 1995; Swedler, 1980) demonstrated that demographic characteristics and a student's educational history are related to their educational goals. This combination of variables, in turn, can determine whether that individual intends to complete his or her program of study.

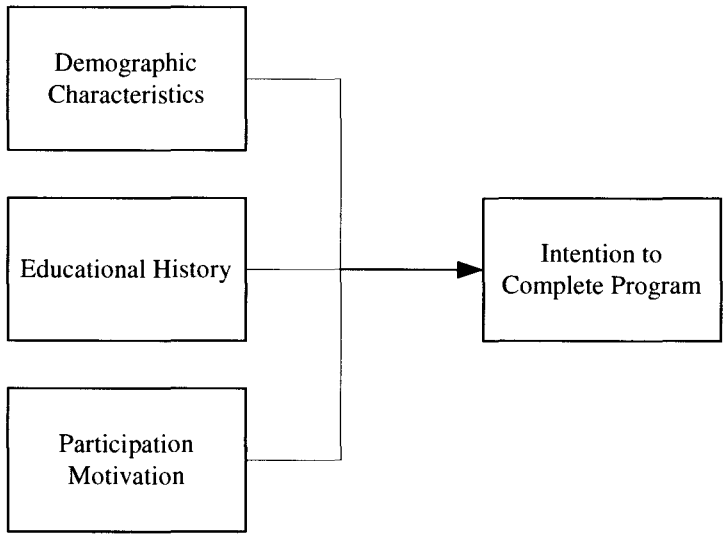

Figure 1. Illustration of the Intention to complete program conceptual model.

Demographic variables in the model can be as few or as numerous as needed for a study. Guided by the literature (Catanzaro, 1999; Florida Atlantic University, 1999; Heinze & Daniels, 1970; Harris, 1997; Hill-Brown, 1989; Hogan, 1986; Kajstura & Keim, 1992; Kearney, et al., 1995; Winter & Harris, 1999), there are six demographic variables in this study: gender, ethnicity, marital status, dependent children, age, and employment status.

The Education Background variables can also contain as many or as few items as necessary for the study. In the model, the variables Demographic Characteristics, Education Background, and Motivation to Participate predict the dependent variable, Intent to Complete Program of Study.

Research Design

This study used a correlational design. Correlational statistics allow the researcher to explore relationships between and among research variables and to provide information concerning the strength and degree of those relationships. Guided by theory and research, a hierarchical regression analysis was performed to determine which characteristics are most influential in predicting program completion (Gall, Gall, & Borg, 1999). Previous literature, reviewed in Chapter II, described the research variables: Demographic Characteristics, Education Background, Motivations to Participate in Reverse Transfer Behavior, and Intent to Complete a Program of Study.

Study Elements.

The study consisted of a number of elements, each one of which examines a factor that influenced study results. The following subsections contain a brief discussion of the significance of each.

Population and participants.

The general student population of KCTCS included approximately 85,000 students enrolled for credit in all districts of KCTCS (KCTCS, 2006). The participants in this investigation were enrolled in a variety of courses and programs in two districts; Jefferson and Elizabethtown. Surveys were administered to entire classes and later separated into reverse transfer and non-reverse transfer groups. Surveys from both groups

of students were analyzed for comparison purposes. The reverse transfer students in this study included two subgroups known as completer (students who had completed a four-year degree or higher) and noncompleter (students who had attended a four-year institution without completing a degree) reverse transfers. There were not enough completer reverse transfer students to analyze as a separate group. Students selected for participation in this study were students enrolled in KCTCS classes in the fall term 2008 and the spring term 2009.

According to Dillman (2000), the expected response rates to a mailed survey can range between 17% and 75%. Because of the mobile nature of community college students in general, and reverse transfer students specifically, this survey was administered in person, thereby assuring a greater return rate. The literature (Heinze & Daniels, 1971; McCormick, 2003) reports reverse transfer rates of between 9% and 27% with an average of approximately 12%. Because programs rich in reverse transfer students, such as allied health, business technology, culinary arts, and commercial art (Catanzaro, 1999; J. Eames, personal communication, October, 2006; Fischer et al., 1975; Hill-Brown, 1989) were targeted, this researcher anticipated approximately 25% of the returned surveys would be from reverse transfer students and therefore useable. A good rule of thumb for conducting regression analyses is to have 20 participants per research variable (Stevens, 2002). The survey instrument contained nine variables based on responses to 58 items. Twenty participants per variable translated to a minimum of 180 usable reverse transfer surveys. Taking this into consideration, 860 surveys were administered.

Research Measures.

Surveys allow the researcher to collect information on a large number of topics quickly and from a large number of participants simultaneously (Dillman, 2000). The instrument used in this study began as a survey developed by the California Association of Community Colleges Commission on Instruction and Research and Development, and was first used by Renkiewicz et al. (1982) at Los Rios Community College District in California. Klepper (1990) expanded and revised the questionnaire for use in a study at Piedmont Virginia Community College. Harris (1997) developed a new version using the previous two instruments and design guidelines suggested by Dillman (1978) and Fowler (1988). This researcher employed a modified version of Harris' scale and included an abbreviated modified version of Crim's (2006) Intent to Enroll scale in this study. The modified scales reflect trends observed in the recent literature and changes in student and societal behaviors. Overall, the reasons the respective instruments were selected were that they collected information on the desired variables, they are similar to many surveys used by other researchers to gather the same types of data, and Harris' (1997) was subjected to reliability and construct validity checks with favorable results.

A reliability assessment was completed for each of the four parts of the survey questionnaire. In Part I, General Information, the reliability coefficients ranged from .94 to 1.00. The mean reliability coefficient for Part I was .99. Part II, College Information, resulted in coefficients ranging from .55 to 1.00. The mean reliability coefficient for Part II was .93. For Part III, Reasons to Attend, reliability coefficients ranged from .73 to .96. The mean reliability coefficient for Part III was .83. The reliability coefficients for Part IV, Goals to Attend, ranged

from .72 to .94. The mean for Part IV was .82. The mean reliability coefficient for the survey instrument was .89, indicating that the instrument is reliable (Borg, Gall, & Gall, 1993) (Winter & Harris, 1999, p. 45-46).

Table 11

Reliability of Research Measures

Variable	Scale	Published reliability (Cronbach's Alpha)
Independent		
Demographic variables	General Information (Harris, 1997)	.99
Education History variables	College Information (Harris, 1997)	.93
Participation Motivation Variables	Reasons for Attending a Community College	.83
	Goals for Attending a Community College [modified] (Harris, 1997)	.82
Dependent		
Intent to Complete Program	Intent to Enroll Scale [modified] (Crim, 2006)	.83

Harris' (1997) survey had four parts. Part I collected information on participant demographic, employment, and financial characteristics. Part II included questions about the participant's education background. Part III addressed the participant's reasons for enrolling in a community college. Part IV asked participants for information regarding their educational, vocational, and personal goals. Harris changed the original open-ended question format of Parts III and IV in Klepper's (1990) instrument to a Likert-type scale format, using reasons and goals found in the previous reverse transfer literature.

The survey instrument used in this study included the following changes to Harris' (1997) survey. Part I, Demographic Characteristics, collected demographic and employment information.

Part II, Education Background, collected information concerning participants' current and previous educational experiences. Question 9, "Have you attended a proprietary postsecondary school?" was added because of the proliferation over the past five years of proprietary schools in close proximity to the subject colleges. These schools mount aggressive marketing campaigns and pose substantial competition for students.

The literature (Adelman, 2006; Ewell et al., 2003; Kearney et al., 1995) identifies highly mobile behavior in student populations in other studies of reverse transfer students. Question 12, "How many two-year and four-year institutions, not counting the institution you currently attend, did you attend before coming to your current school?" was added to measure the mobility of the population in this study.

Because it is possible for students to obtain more than one credential at the community college before, or after obtaining a four-year degree, "Certificate, College Diploma, and Associate Degree" were added to the list of completed credentials in question 13.

The literature (Anderson & Darkenwald, 1979; Bigelow, 1981; Education Resources Institute, 1997) indicates that reverse transfer students often wait substantial amounts of time between attending the four-year institution and attending the community college. Question 14, "How long did you wait after receiving your last credential before enrolling in a community or technical college?" was added to measure the hiatus between school enrollments.

Because the literature (Miller & Lu, 2003; Peter & Cataldi, 2005; Townsend, 2001) indicates that reverse transfer students take advantage of on-line offerings and sometimes enroll in more than one institution at a time, question 17, "Have you ever taken college class(es) for credit on-line?" and question 18, "Have you ever enrolled at more than one

postsecondary institution for credit at the same time?", were added to measure the extent of this behavior in the study population.

Many of the early policies regarding reverse transfer students centered on the assumption that the vast majority of these students enrolled in the community college because of academic difficulty at the four-year institution (Heinze & Daniels, 1970; Kuznik, 1972; Meadows & Ingle, 1968; Muck & Undem, 1965). Question 20, "What was your approximate grade-point average before you enrolled at your current community and technical college?" was added to examine this assumption.

Because many students work while attending college, question 28, "Are you currently working in a field related to your program of study?" was added. The literature indicates that some reverse transfer students return to school to explore or train for entirely new careers. Townsend (2003) listed job dissatisfaction as a substantial motivation to acquire additional education.

Part III in Harris' survey reduced the 32 responses for reasons for community college attendance in Renkiewicz et al. (1982) and Klepper's (1990) versions to 17, but also gave the respondent the opportunity to write in reasons not listed. Harris used a 5-point Likert-type response scale with the anchors 1 = *Not at all Important* and 5 = *Extremely Important.*

Winter et al. (2001) performed a factor analysis of the data obtained by Harris' (1997) survey ($\alpha = .05$, principal-axis factoring, minimum factor-loading criterion = .30, orthogonal rotation). The analysis "provided insights regarding the construct validity of the survey instrument. The stepwise discriminant analysis provided a solution that rendered profiles for both completer reverse transfers and noncompleter reverse

transfers." (p. 275). The factor analysis of the 23 survey items yielded a three-factor solution that explained 43.6% of the variance. They labeled the factors as "knowledge acquisition and self-improvement", "institutional convenience", and "improving performance and preparing for transfer".

Because many of the items in Harris' Parts III and IV were the same or very similar, the present survey contained the same items from Harris' Part III, Reasons for Attending a Kentucky Community College, and the items in Harris' Part IV, Goals for Attending a Community College. (Duplicate items were eliminated.) One modified item from Crim's (2006) Intent to Enroll scale, "Curiosity about the subject." was added to measure the extent to which intellectual curiosity played a part in participants' choice to enroll in the two-year college (Reio & Wiswell, 2006). Participants were also given the opportunity to add any reason not listed.

Part III in the survey for this study measured the student's motivations for participating in reverse transfer behavior using statements accompanied by a 6-point Likert-type response scale, with the anchors 1 = *Not at all Important* and 6 = *Extremely Important* (Dillman, 2000).

Part IV is a section titled "Intent to Complete Program." It is a scale consisting of five items measured on a 6-point Likert-type response scale with the anchors 1 = *Not at all Likely* and 6 = *Extremely Likely* based on Crim's (2006) Intent to Enroll Scale. Crim's (2006) questionnaire collected data concerning students' on-line course experiences and the likelihood of enrolling in another on-line course. Four of the questions in the survey for this study were modified versions of questions from Crim's (2006) questionnaire. The

statement, "It is likely I will complete this program of study", was added to directly measure the participants' intention to complete their current program of study.

Table 12

Study Instrument Composition

	Type of Items	Number of Items
Part I	Demographic variables	7
Part II	Education background	20
Part III	Motivation to participate	25
Part IV	Intent to complete a program of study	5

Research Protocol.

Guided by Dillman (2000), the following research protocol was followed. The instruments were administered by the researcher to a convenience sample of classes in two KCTCS districts, Elizabethtown and Jefferson. The sample contained a wide variety of technical and academic, day and night classes. Instructors voluntarily allowed in-person administration of the survey during class time. The Provost at Jefferson District issued a blanket email asking for faculty cooperation in the study. The literature (Catanzaro, 1999; Fischer et al., 1975; Hill-Brown, 1989; Lambert, 1994) and institution history indicated that certain programs, such as Allied Health, Nursing, Business, Culinary Arts, and Commercial Art, attract more reverse transfer students than many other programs. The researcher contacted faculty at each campus, concentrating on these program areas, and asked for cooperation. This researcher followed the same procedure with the Provost at Elizabethtown.

Table 13

Timeline and Tasks for Data Collection

Timing	Tasks
1. Week 1	1. Ask district provosts to request faculty cooperation. 2. Send email to faculty in both districts asking for voluntary participation.
2. Week 2	3. Schedule administration of surveys.
3. Week 3	4. Begin administration of surveys.
4. Duration of the study.	5. Maintain a data log on surveys submitted and assign a course response identification number for each returned survey.
5. At conclusion of data collection.	6. Send participating faculty "Thank You" notes.

Data Analysis

This study sought to identify a combination of research variables that predict program completion among reverse transfer students. The first research question is "What are the current demographic characteristics of reverse transfer students?" Descriptive analyses were performed to quantify reverse transfer student demographic characteristics. To address research question two, correlation coefficients were computed to assess the association between the intent to complete a program of study and interval scale variables (e.g. dependent children, age). Pearson product-moment correlations assessed associations between interval scaled variables (e.g., age and credit hours). To answer research question three, hierarchical logistical regression analysis were used to predict the intent to complete a program.

The statistical analyses were performed using SPSS Statistical Package for the Social Sciences. Table 14 shows the statistical procedures and analysis that were calculated for each research question.

Table 14

Statistical Analysis of Data

Research Question	Variable(s) measured	Statistical procedure(s) to be used
1. What are the current demographic characteristics of reverse transfer students?	Demographics	Descriptive
2. What are the current motivations for reverse transfer behavior?	Participation Motivation	Correlations
3. After controlling for select demographic variables (i.e. gender, ethnicity, marital status, dependent children, age, and employment status), to what degree do motivations predict the intent to complete a program at the community college?	Participation Motivation Intention to complete a program of study.	Factor Analysis Hierarchical regression. Predictor variables: Demographics, Participation Motivation Dependent variable: Intention to complete a program of study.

Study Limitations

There are several limitations to this research design. The purposive selection of programs and institutions to sample lacked randomization, and may not be representative of reverse transfer students throughout the system. Because completion of the survey was strictly voluntary, data was collected only from those students who chose to respond, possibly resulting in some bias. However, less than 0.5% chose not to participate and less than 0.5% submitted partially completed surveys. By administering the survey in person, response rate was maximized, but full participation was not expected (Dillman, 1978).

All of the data analyzed in this study came from self-report questionnaires completed by the participants. Such questionnaires are inexpensive and easy to use in

social science research (Rogelberg & Luong, 1998). However, measuring all variables from the same instrument completed at one time raises the possibility that common source method variance could have inflated the correlations among variables (Crampton & Wagner, 1994).

Data used in this study came from one state. The institutions examined also were public institutions located in urban and suburban areas, with little representation of rural groups. Populations in other areas, only urban, only rural, or in private institutions may exhibit different motivations for reverse transfer behavior.

The study sample was a convenience sample. The instructors who volunteered to allow the surveys to be administered in their classes were predominantly English and humanities instructors, with fewer teaching biology, nursing, fine arts, business and technical programs. The English classes contained almost exclusively first semester freshmen and very few reverse transfer students. The nursing and fine arts classes contained very high proportions of reverse transfer students. Taken as a group, however, the sample population contained approximately the expected proportion of reverse transfer students. The model developed for this study may be useful in examining populations within other schools, districts, or states.

The results of this study are presented in Chapter IV and discussion, conclusions, and recommendations for further study in this area are presented in Chapter V. The goal of this study was to contribute to the knowledge of reverse transfer students and to provide information for consideration during policy-making concerning the measurement of institutional outcomes.

CHAPTER IV

RESULTS

Surveys allow the researcher to collect information on a large number of topics quickly and from a large number of participants simultaneously (Dillman, 2000). This researcher employed a modified version of Harris' scale and an abbreviated modified version of Crim's (2006) Intent to Enroll scale in this study. The modified scales reflect trends observed in the recent literature and changes in student and societal behaviors. Overall, the reasons the respective measures were selected were that they collected information on the desired variables, and they are similar to many surveys used by other researchers to gather the same types of data. The researcher subjected Harris' survey (1997) to reliability and construct validity checks, with favorable results.

Research Questions

The purpose of this study was to examine reverse transfer student demographic variables, the motivations for reverse transfer behavior, and the implications this behavior has for completion rates. This study's focus was on the predictive potential of factors identified from the literature specific to community college program completion. The research questions that guided this study are as follows:

1. What are the current demographic characteristics of reverse transfer students?
2. What are the current motivations for reverse transfer behavior
3. After controlling for select demographic variables (gender, ethnicity, marital status, dependent children, age, and employment status), to what degree do

motivations for reverse transfer behavior predict program completion at the community college?

Analyses

The statistical analyses were performed using SPSS Statistical Package for the Social Sciences. Table 14 shows the statistical procedures and analysis that were calculated for each research question.

Demographic variables.

Descriptive analyses were performed to quantify reverse transfer student demographic characteristics. Correlation coefficients were computed to assess the association between the intent to complete a program of study and interval scale variables (e.g. dependent children, age). Pearson product-moment correlations assessed associations between interval scaled variables (e.g., age and credit hours). Chi square and independent *t*-tests were conducted to determine significant differences between groups. Multiple regression analysis was performed to address research question three.

Gender.

As seen in Table 15, the gender distribution of reverse transfer students and nonreverse transfer students was almost identical for this study at about 60% female and 40% male. The observed distributions for this study were, however, different than those reported by both of the study districts for the entire student population.

Table 15

Gender Distribution of Students

	Reverse Transfer		Nonreverse Transfer		All students – Jefferson*		All students – Elizabethtown*	
	n	%	*n*	%	*n*	%	*n*	%
Male	78	39.8	250	39.4	6764	46.9	2389	41.5
Female	118	60.2	385	60.6	7648	53.1	3373	58.5
Total	196		635		14,412		5762	

* KCTCS Fact book, 2009.

Ethnicity.

Contrary to the results presented by various researchers, the distribution of ethnic groups in the reverse transfer and nonreverse transfer student populations in the current study were similar, with the greatest differences appearing in the Hispanic and Other categories (Table 16). The selection of districts to survey probably had some influence on the demographic distribution. Not only is Jefferson by far the largest district within KCTCS, it is also the most diverse. The Elizabethtown and Jefferson districts have similar minority proportions with the exception of African Americans: Elizabethtown 8.3%, Jefferson 18.7% (Table 16). The percentage of African American nonreverse transfer students in the study was similar to that reported for all of Jefferson district, but substantially greater than that reported for Elizabethtown district. The percentage of African American reverse transfer students in the study was higher than that reported for both districts.

Table 16

Ethnicity of Students

	Reverse Transfer		Nonreverse Transfer		All students – Jefferson*		All students – Elizabethtown*	
	n	%	*n*	%	*n*	%	*n*	%
White	142	72.8	449	71.3	9576	66.4	4613	80.1
African American	44	22.6	114	18.1	2697	18.7	479	8.3
Asian	3	1.5	10	1.5	244	1.7	106	1.8
Hispanic	3	1.5	20	3.2	351	2.4	127	2.2
Native American	0	0.0	3	0.5	55	0.4	27	0.5
Other	3	1.5	34	5.4				
Total	195		630		14,412		5762	

*KCTCS Fact book, 2009.

Marital status.

As shown on Table 17, there was a difference in the percentages of reverse and nonreverse transfer students in all categories. Higher percentages of reverse transfer students in the study were married, divorced, separated, or widowed than nonreverse transfer students. Larger proportions of nonreverse transfer students were never married or did not report.

Table 17

Marital Status of Students

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Single	131	66.84	522	81.69
Married	46	23.47	72	11.27
Divorced	14	7.14	30	4.70
Separated	2	1.02	5	0.78
Widowed	3	1.53	2	0.31
	196		631	

Dependent children.

Dependent children were defined as age 17 or less and dependent on parents/guardians for living expenses. As shown in Table 18, over one third of the reverse transfer students (35.3%) had dependent children, compared to slightly more than one quarter (25.9%) of nonreverse transfer students. The percentage of reverse transfer students with dependent children was significantly higher than the percentage of nonreverse transfer students, χ^2 (2) = 5.76, $p < .05$.

Table 18

Students with Dependent Children

Have dependent children*		Reverse Transfer	Nonreverse Transfer
Yes	*n*	60	151
	% within Group	35.3	25.9
No	*n*	110	432
	% within Group	64.7	74.1

*Dependent children were defined as age 17 or less and dependent on parents/guardians for living expenses.

Age.

The mean age of 28.3 for reverse transfer students was significantly higher than nonreverse transfer students (M = 23.9) t (256) = 5.06, $p < .001$. Table 19 shows the age distribution of reverse and nonreverse transfer students. When combined, the first two lines shows that nearly three-quarters of the nonreverse transfer students were age 25 or less, compared to just over half of the reverse transfer students.

Table 19

Age Distribution of Students

	Reverse Transfer		Nonreverse Transfer	
Years of age	*n*	%	*n*	%
≤ 20.0	39	20.4	300	48.4
20.1-25.0	62	32.5	158	25.5
25.1-30.0	37	19.4	64	10.3
30.1-35.0	12	6.3	36	5.8
35.1-40.0	17	8.9	26	4.2
40.1-45.0	7	3.7	15	2.4
45.1-50.0	4	2.1	9	1.5
50.1-55.0	8	4.2	7	1.1
55.1-60.0	0	0.0	3	0.5
> 60.0	5	2.6	2	0.3
Mean	28.3		23.9	

Employment.

As shown in Table 20, almost a quarter of the reverse transfer students in the current study were unemployed. There was no significant relationship between employment status and student group (χ^2 (2) = 5.39, p = .068, > .05).

Table 20

Employment Status of Students

Employment Status		Reverse Transfer	Nonreverse Transfer
Full-time	*n*	66	178
	% within Group	34.6	28.3
Part-time	*n*	83	333
	% within Group	43.5	53.0
Unemployed	*n*	42	117
	% within Group	22.0	18.6

Similar proportions of working reverse transfer and nonreverse transfer students held multiple part-time jobs (Table 21).

Table 21

Students Holding Multiple Jobs

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Yes	29	14.8	89	14.0
Full-time	14	48.3	17	19.1
Part-time	25	86.2	73	82.0
No	166	84.7	542	85.2

Income.

As can be seen in Table 22, the distribution of income levels was similar for reverse transfer and nonreverse transfer students in the present study. For both groups of students, the largest income categories were $\leq$ \$9,999 and \$10,000 to \$14,999. Slightly higher percentages of nonreverse transfer students fell into these categories than did reverse transfer students. The mean income category for nonreverse transfer students was \$30,000 to \$39,999, compared to the mean income category for nonreverse transfer students of \$20,000 to \$29,999. Both student groups had over 4% of their members in the over \$120,000 income category.

Table 22

Student Family Income Levels

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
≤ $9,999	30	15.3	137	21.5
$10,000-14,999	19	9.7	88	13.8
$15,000-19,999	16	8.2	46	7.2
$20,000-29,999	22	11.2	64	10.1
$30,000-39,999	10	5.1	47	7.4
$40,000-49,999	14	7.1	41	6.5
$50,000-59,999	18	9.2	30	4.7
$60,000-74,999	22	11.2	41	6.5
$75,000-99,999	12	6.1	21	3.3
$100,000-119,000	10	5.1	17	2.7
≥ $120,000	9	4.6	39	6.1
No report	14	7.1	65	10.2

Education History.

Previous educational experiences can significantly influence decisions and goals of students. While the questions related to students' histories are not complete, they do provide some insight into possible influences.

Parents' education.

As shown in Table 23, a greater proportion of nonreverse transfer students than reverse transfer students had parents who did not graduate from high school, completed only high school, or held a GED. Both groups had similar proportions of parents who had some college, but no degree. Reverse transfer students had similar proportions of mothers and fathers with vocational credentials (5.6% and 5.1% respectively), while nonreverse transfer students had a slightly greater proportion of fathers with vocational credentials (7.7%) but a smaller proportion of mothers with vocational credentials (3.3%). Both

groups did not report the level of education of their fathers at greater rates than for their mothers, although almost twice as many nonreverse transfer students failed to report on parental education than reverse transfer students.

Table 23

Highest Credential Earned by Students' Parents

	Reverse Transfer				Nonreverse Transfer			
	Mother		Father		Mother		Father	
	n	%	*n*	%	*n*	%	*n*	%
Less than high school diploma	10	5.1	18	9.2	55	8.7	72	11.3
High school diploma or GED	60	30.6	62	31.6	230	36.2	209	32.9
Some college - no degree	39	19.9	29	14.8	125	19.7	100	15.7
Vocational or Technical certificate	11	5.6	10	5.1	21	3.3	49	7.7
Associate or other 2 year degree	12	6.1	12	6.1	68	10.7	41	6.5
Bachelor's degree	29	14.8	38	19.4	79	12.4	76	12.0
Master's, Doctorate, or Professional degree	32	16.3	19	9.7	42	6.6	43	6.8
No report	3	1.5	8	4.1	16	2.5	46	7.2

Initial enrollment.

A slightly smaller percentage of reverse transfer students began their KCTCS enrollment in the Fall 2008 semester, 31.9%, than nonreverse transfer students, 36.5%. Few students enrolled in two-year colleges before or after their initial enrollment in a KCTCS school. As seen in Table 24, both reverse transfer and nonreverse transfer students who enrolled in other schools did so mainly before their initial enrollment in a KCTCS school, however, large proportions of both groups who indicated they attended other schools did not give the time at which they did so.

Table 24

Enrollment of Students in Other Two-Year Schools

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Before	16	72.7	32	66.7
After	2	9.1	8	16.7
No report	4	18.2	8	16.7
Total	22	11.2	48	7.6

Previous education.

As shown in Table 25, 11.2% of reverse transfer students attended other two-year colleges or proprietary schools in addition to a four-year institution. However, over a third of reverse transfer students did not report on this variable. A smaller percentage, 7.6%, of nonreverse transfer students reported attending a two-year college before attending their current schools.

Table 25

Students Who Previously Attended a Two-year College

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Yes	22	11.2	48	7.6
No	102	52.0	578	90.9
No report	72	36.7	10	1.6
N	196		636	

As seen in Table 26, in addition to reverse transfer students having attended a four-year institution, they were also more likely to hold a credential of some sort. Only 7.1% nonreverse transfer students in the current study held previous credentials at the

Associate Degree level or less. This compared to 20.3% of reverse transfer students. Only one of the reverse transfer students in the current study held a graduate degree.

Table 26

Highest Credential Previously Earned by Students

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Certificate	13	6.6	57	2.4
College Diploma	3	1.5	13	2.0
Assoc. Degree	23	11.7	14	2.2
Bachelor's Deg.	26	13.3	0	0.0
Master's Deg.	1	0.5	0	0.0
Doctorate	0	0.0	0	0.0
Professional Deg.	0	0.0	0	0.0
Other	1	0.5	3	0.5
None	106	54.1	404	63.5
No report	23	11.7	145	22.8

Period of Non-attendance.

As seen in Table 27, a substantial number of nonreverse transfer students had periods of non-attendance in college, however the length of the hiatus tended to be shorter than reported by reverse transfer students. In the judgment of the researcher, these numbers, a mean of 3.9 years for reverse transfer students and 2.7 years for nonreverse transfer students, could be misleading. Although the vast majority of students in both groups enrolled in courses immediately after leaving their last institution (27.6% of reverse transfer students and 29.6% of nonreverse transfer students), some waited 40 or more years to return to school, which would push the mean higher than expected, despite the low numbers of students who did so. A slightly higher proportion of reverse transfer students entered the community college within five years of leaving their last institution

(53.4%) compared to nonreverse transfer students (46.2%). Large proportions (30.6% of reverse transfer students and 45.9% of nonreverse transfer students) did not answer the question on the survey.

Table 27

Period of Non-attendance of Students

	Reverse Transfer			Nonreverse Transfer		
	n	Range	*M*	*n*	Range	*M*
Years between enrollments	136	0.0-40.0	3.9	344	0.0-46.0	2.7
No period of non-attendance	54	27.6%		188	29.6%	
No report	60	30.6%		292	45.9%	

Course load.

Full-time attendance is 12 credit hours or more during the fall or spring semester or nine credit hours during the summer sessions. As shown in Table 28, the percentage of reverse transfer students attending full-time (55.6%) was smaller than the percentage of nonreverse transfer students attending full-time (67.2%). In addition, a greater proportion of reverse transfer students enrolled in more than 15 credit hours, 4.1%, than nonreverse transfer students, 3.5% (Table 28). The percentage of full-time students in the study sample (both reverse transfer and nonreverse transfer) was higher than the percentage of full-time students among all JCTC and ECTC students.

Table 28

Course Load of Students

credit hours	Reverse Transfer		Nonreverse Transfer		Jefferson Community & Technical College*		Elizabethtown Community & Technical College*	
	n	%	*n*	%	*n*	%	*n*	%
full-time	109	55.61	407	67.16	5129	35.6	2674	46.4
21	1	0.51	0	0				
20	1	0.51	2	0.33				
19	2	1.02	4	0.66				
18	3	1.53	1	0.17				
17	1	0.51	3	0.5				
16	0	0	11	1.82				
15	18	9.18	42	6.93				
14	4	2.02	19	3.14				
13	14	7.14	87	14.36				
12	65	33.16	236	38.94				
part-time	85	43.37	199	32.84	9283	64.4	3088	53.6
11	1	0.51	3	0.5				
10	6	3.06	17	2.81				
9	41	20.92	86	14.19				
8	3	1.53	4	0.66				
7	4	2.02	10	1.65				
6	20	10.2	57	9.41				
4	3	1.53	7	1.16				
3	6	3.06	10	1.65				
2	0	0	1	0.17				
0	1	0.51	2	0.33				
missing data	2	1.02	34	5.61				
	196		606		14,412		5762	

*KCTCS Fact book, 2009.

As shown in Table 29, reverse transfer students enrolled in multiple institutions concurrently at a greater rate than nonreverse transfer students.

Table 29

Students Who Attended More Than One Institution at the Same Time

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Yes	12	6.1	9	1.4
No	178	90.8	605	95.1
No report	6	3.1	22	3.5

Table 30 shows students who reported taking online classes. A significantly greater percentage of reverse transfer students (34.5%) than nonreverse transfer students (21.4%) enrolled in online course(s) (χ^2 (1) =13.89, $p < .001$).

Table 30

Students Who Took Online Courses

Online classes		Reverse Transfer	Nonreverse Transfer
Yes	*n*	67	134
	% within Group	34.5	21.4
No	*n*	127	493
	% within Group	65.50	78.6

Table 31 shows the age distributions of students who took online courses. Except in the youngest two age groups and the 40.1-45.0 age-group, a greater proportion of reverse transfer students enrolled in online classes than did nonreverse transfer students.

Table 31

Age Distribution for Students Who Took Online Courses

Age	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
≤ 20.0	8	11.9	33	25.2
20.1-25.0	15	22.4	50	38.2
25.1-30.0	19	28.4	17	13.0
30.1-35.0	7	10.5	12	9.2
35.1-40.0	8	11.9	12	9.2
40.1-45.0	2	3.0	4	3.1
45.1-50.0	1	1.5	1	0.8
50.1-55.0	2	3.0	1	0.8
55.1-60.0	0	0.0	0	0.0
> 60.0	2	3.0	0	0.0
No report	3	4.5	1	0.8
Total *n*	67	34.2	131	20.6

Academic performance.

The Grade Point Averages (GPAs) of reverse transfer students in the present study showed a small but significant improvement over their GPAs in previous institutions. A dependent *t*-test showed that the current mean GPA (3.04) was greater than the previous mean GPA (2.78), (t (96) = 2.97, $p < .01$). The distribution of the grades showed that 22.1% were in academic distress (GPA < 2.0) when they left their previous institutions.

Programs of study.

Table 32 shows the two student groups compared on their declaration of a college major. A significantly higher percentage of reverse transfer students (58.4%) than nonreverse transfer students (44.4%) had declared a major, χ^2 (2) = 12.051, $p < .01$. The programs of study for the students in the current study are shown in Appendix L. In

summary, both reverse transfer and nonreverse transfer students clustered around three main areas of study: health-related fields, business, and education. Nonreverse transfer students reported majoring in a greater variety of programs of study than the reverse transfer students, but most of the listed majors were given by less than 1% of students each.

Table 32

Declaration of a Major by Students

		Group	
Declared a major		Reverse Transfer	Nonreverse Transfer
Declared	*n*	104	267
	% within Group	58.4	44.4
Plan to declare	*n*	50	202
	% within Group	28.1	33.6
Undecided	*n*	24	133
	% within Group	13.5	22.1

Educational plans.

Table 33 shows that 84.2% of reverse transfer students intended to pursue degrees that would require transfer to four-year institutions. This contrasts with 69.9% of nonreverse transfer students. Only 11.7% of reverse transfer students intended to stop at an Associate Degree, compared to 22.2% of nonreverse transfer students. A chi square test revealed that there was no significant difference in the percentages of students intending to continue education beyond KCTCS between nonreverse transfer students (77.6%) and reverse transfer students (77.9%).

Table 33

Educational Goals for Students

	Reverse Transfer		NRT	
	n	%	*n*	%
Certificate	2	1.0	8	1.3
Diploma	1	0.5	6	0.9
2-yr associate degree	23	11.7	141	22.2
Bachelor's degree	56	28.6	166	26.1
Master's degree	80	40.8	179	28.1
Doctorate	17	8.7	63	9.9
Professional degree	12	6.1	37	5.8
Other	2	1.0	4	0.6
Met goals	0	0.0	0	0.0
No plan	1	0.5	5	0.8
No response	2	1.0	27	4.3
Total *n*	196		636	

Table 34 shows that fewer reverse transfer students (12.3%) were unsure about their future education plans compared to nonreverse transfer students (16.7%).

Table 34

Plans to Continue Education of Students

Plan to continue education after leaving KCTCS		Reverse Transfer	Nonreverse Transfer
Yes	*n*	152	489
	% within Group	77.9	77.6
No	*n*	19	36
	% within Group	9.7	5.7
Unsure	*n*	24	105
	% within Group	12.3	16.7

Participation Motivation

A factor analysis was performed on the 26 items on the Participation Motivation Scale, using just the reverse transfer students. Two criteria were used to determine if a factor analysis was warranted: (a) the Kaiser-Meyer-Olkin (KMO) index of factorability,

Table 35

Results of the Factor Analysis of the Participation Motivation Scale (n = 143)

	Self Improvement	Practicality	Vocational/ Career	Transfer
c. Receive occupational instruction leading to employment upon graduation	0.641			
d. Quality of instruction	0.544			
i. Acquire skills for a career change	0.634			
j. Learn about new technologies	0.503			
r. College has a good reputation	0.522			
s. Complete an associate's degree	0.617			
u. Complete courses for personal growth or interests	0.579			
v. Prepare for career advancement	0.716			
w. Upgrade skills or knowledge	0.611			
x. Learn new skill(s)	0.724			
k. Course(s) scheduled at convenient times		0.714		
l. Course(s) scheduled at convenient locations		0.808		
m. College is close to my home		0.752		
n. College is close to my work		0.463		
o. Minimal admission requirements		0.493		
q. Low cost		0.393		
e. Obtain training related to my current job			0.592	
f. Update existing job skills			0.759	
g. Improve my grade point average			0.610	
h. Improve basic skills (reading, writing, mathematics)			0.589	
a. Prepare to transfer to a four-year college or university				0.720
t. Complete courses to transfer to another institution				0.603

Note: Table shows factor loadings after varimax rotation.

and (b) the Bartlett test of sphericity. The KMO index was .870, which exceeded the suggested minimum of .60 (Stevens, 2009). In addition, the Bartlett test was statistically significant χ^2 (325) = 2580.60, $p < .001$. Thus, the researcher concluded that the data were appropriate for factor analysis. Table 35 shows items loading on the four factors that were retained for interpretation. These factors were labeled Self Improvement, Practicality, Vocational/Career, and Transfer and they accounted for 52.36% of the total variance using Principal Axis Factoring with varimax rotation and Kaiser normalization. Following the factor analysis, scales were constructed using the factor analysis as a guide. This involved averaging the items that loaded highest on each factor. The average was used to represent the scale. To determine reliability, Cronbach's alpha internal consistency coefficient was calculated for each scale. Results were as follows: self improvement, .90; practicality, .80; vocational/career, .79; transfer, .74. All values for the alpha coefficients exceeded the recommended minimum for scales that are used in research (Nunnally & Bernstein, 1994). As seen in Table 36, there was significant correlation between several of the scales: Self Improvement and Practicality, Self Improvement and Vocational/Career, Self Improvement and Transfer, Practicality and Vocational/Career, Practicality and Transfer, and Vocational/Career and Transfer. There was no significant correlation between any of the factors and the variable Intent to Complete. The factor analysis is relevant to the second research question of this study: What are the current motivations for reverse transfer behavior? The reverse transfer students who completed the questionnaire were responding to the prompt: "Reasons and goals for attending a community or technical college are shown below. For each reason listed, please indicate how important the reason is to you personally by circling the one

Table 36

Correlations of Intent to Complete and the Motivation Factors for Reverse Transfer Students

		Intent to Complete	Self Improvement	Practicality	Vocational/ Career	Transfer
Intent to Complete	Pearson Correlation	1	0.025	0.044	-0.048	0.048
	Sig. (2-tailed)		0.747	0.569	0.528	0.529
	N	173	172	170	172	172
RT Self Improvement	Pearson Correlation	0.025	1	.494**	.560**	.237**
	Sig. (2-tailed)	0.747		0	0	0
	N	172	193	190	192	192
RT Practicality	Pearson Correlation	0.044	.494**	1	.455**	.283**
	Sig. (2-tailed)	0.569	0		0	0
	N	170	190	190	190	190
RT Vocational/ Career	Pearson Correlation	-0.048	.560**	.455**	1	.224**
	Sig. (2-tailed)	0.528	0	0		0
	N	172	192	190	192	191
RT Transfer	Pearson Correlation	0.048	.237**	.238**	.224**	1
	Sig. (2-tailed)	0.529	0	0	0	
	N	172	192	190	191	193

**Correlation is significant at the 0.01 level (2-tailed).

number that reflects your personal opinion best." Each item was then rated on a six-step scale, ranging from *1=not at all important* to *6=extremely important.* The motivations governing student behavior were: self improvement (e.g., Prepare for career advancement), practicality (e.g., Course(s) scheduled at convenient locations), vocational/career (e.g., Upgrade existing job skills), and transfer (e.g., Prepare for transfer to a four-year college or university).

Intent to Complete

Well over half of the students in the present study intended to graduate (Table 37). A chi square test revealed that the intent to graduate was higher for nonreverse transfer students (56.7%) than for reverse transfer students (53.1%), $\chi^2(2) = 8.53$, $p < .05$. The last part of the questionnaire completed by students consisted of five items that asked about their plans to complete the program in which they were enrolled. Each item was rated on a six-step scale, ranging from *1=strongly disagree* to *6=strongly agree.* After preliminary analysis, it was found that four items made up a scale that had sufficient reliability (Cronbach's alpha = .76). The set of items making up the *intent to complete* scale were these: I often think about quitting this program of study (reverse coded), It is likely that I will look for a new program of study to take next semester (reverse coded), I will probably look for a new program of study to take within the next year (reverse coded), and It is likely I will complete this program of study.

Table 37

Intent to Graduate

Intent to graduate		Group	
		Reverse Transfer	Nonreverse Transfer
Yes	*n*	103	358
	% within Group	53.1%	56.7%
No	*n*	66	154
	% within Group	34.0%	24.4%
Uncertain	*n*	25	116
	% within Group	12.9%	18.9%

$p < .05$

Ordinary Least Squares (OLS) multiple regression was performed on the data to address Research Question 3. A hierarchical multiple regression was performed. Score on the intent to complete scale was the dependent variable. In the first step, student background variables were entered into the equation as predictors. In the second step, the questionnaire scales that made up the factors of participant motivation were entered. Table 38 shows means and standard deviations on all variables and Table 39 shows intercorrelations.

A preliminary regression analysis was performed with the data, and analysis of diagnostic plots showed skewness in the residuals of the regression equation. Consequently, scores on the dependent variable were transformed by taking the inverse of the *intent to complete* score and using the inverse transform as the dependent variable. The variable gender was coded 1= male, 2 = female. Ethnicity was coded 1= White, 2= minority. The variable marital status was coded 1 = not married, 2 = married. The variable *have children* was coded 1 = yes, 2 = no. As can be seen in Table 40, the average age of participants was about 28 years. There were two dummy codes that represented the variable employment status. They represented three categories of

employment status: full-time, part-time, and unemployed. Finally, there were four scale scores that represented the four factors of the participation motivation questionnaire. These were the scales: (a) self-improvement, (b) practicality, (c) vocational/career, and (d) transfer.

Table 38

Descriptive Statistics on Variables in Multiple Regression (n = 143)

	M	Std. Deviation	*n*
Intent to complete (log transform)	.7227	.28521	143
Gender	1.63	.485	143
Ethnicity	1.2867	.45382	143
Marital Status	1.2448	.43145	143
Have children	1.67	.471	143
Age	28.1766	10.87521	143
Employment Dummy code1	.3776	.48650	143
Employment Dummy code 2	.4196	.49522	143
Scale: Self Improvement	4.5497	1.17984	143
Scale: Practicality	4.3385	1.21024	143
Scale: Vocational/Career	3.9563	1.37539	143
Scale: Transfer	4.8252	1.41204	143

Examination of Table 39, the correlation table, revealed that two variables had significant Pearson correlations with the dependent variable *intent to complete.* These were gender and marital status. These correlations meant that relatively high intent of complete scores were associated with female gender and married status. The predictor variables were generally uncorrelated with one another, meaning there was little evidence of multicollinearity.

Table 39

Correlations Among Variables Used in the Multiple Regression (n = 143)

	Intent R1	Gender	Adj Ethnicity	Adj Mar Status	Children	Age	Employ D1	Employ D2	RT Self Impr	RT Practical	RT Voc Career	RT Transfer
Intent R1	1	0.283	0.073	0.217	-0.07	0.082	0.077	0.028	0.042	0.03	-0.06	0.057
Gender	.283**	1	0.134	0.1	-0.23	0	-0.03	0.066	0.106	0.082	-0.11	-0.01
Adj Ethnicity	0.073	0.134	1	0.071	-0.35	0.156	0.24	-0.23	0.169	0.095	0.218	0.2
Adj Mar Status	.217*	0.1	0.071	1	-0.29	0.387	0.06	-0.12	0.07	-0.05	-0.01	0.065
Children	-0.074	-0.23	-0.35	-0.29	1	-0.45	-0.13	0.203	-0.24	-0.09	0.072	0.125
Age	0.082	0	0.156	0.387	-0.45	1	0.02	-0.1	0.103	-0.04	-0.01	-0.08
Employ D1	0.077	-0.03	0.24	0.06	-0.13	0.02	1	-0.66	0.027	0.083	0.025	0.153
Employ D2	0.028	0.066	-0.23	-0.12	0.203	-0.1	-0.66	1	0	-0.01	0.01	0.005
RT Self Impr	0.042	0.106	0.169	0.07	-0.24	0.103	0.027	0	1	0.546	0.544	0.265
RT Practicality	0.03	0.082	0.095	-0.05	-0.09	-0.04	0.083	-0.01	0.546	1	0.507	0.306
RT Voc Career	-0.056	-0.11	0.218	-0.01	0.072	-0.01	0.025	0.01	0.544	0.507	1	0.216
RT Transfer	0.057	-0.01	0.2	0.065	0.125	-0.08	0.153	0.005	0.265	0.306	0.216	1

**p<.001 *p< .01

Table 40

Regression Coefficients for Hierarchical Regression (n = 143)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.102	0.210		0.486	0.628
	Gender	0.159	0.049	0.270	3.222	0.002
	Adj Ethnicity	0.020	0.055	0.032	0.367	0.714
	Adj Mar Status	0.132	0.058	0.199	2.254	0.026
	Children	0.041	0.059	0.068	0.696	0.488
	Adj DOB	0.001	0.002	0.042	0.439	0.662
	Employ D1	0.099	0.063	0.168	1.559	0.121
	Employ D2	0.083	0.063	0.144	1.317	0.190
2	(Constant)	0.069	0.240		0.290	0.773
	Gender	0.151	0.051	0.257	2.952	0.004
	Adj Ethnicity	0.033	0.060	0.052	0.539	0.591
	Adj Mar Status	0.135	0.060	0.204	2.237	0.027
	Children	0.055	0.066	0.090	0.833	0.407
	Adj DOB	0.001	0.003	0.044	0.455	0.650
	Employ D1	0.096	0.065	0.164	1.471	0.144
	Employ D2	0.083	0.064	0.144	1.287	0.200
	Self Improvement	0.007	0.027	0.030	0.269	0.789
	Practicality	0.009	0.025	0.039	0.367	0.714
	Vocational/Career	-0.018	0.023	-0.085	-0.765	0.446
	Transfer	-2.777E-5	0.019	0.000	-0.001	0.999

Note. At step 1, $R^2 = .093$, $p = .005$. At step 2, $R^2 = .141$, $p < .001$, (adjusted $R^2 = .069$).

Table 40 shows the results of the regression analysis. The table shows regression coefficients for the first step of the equation, when only background variables were entered into the equation, and step 2 when questionnaire variables were added. For step 1, the background variables had a significant relationship with the dependent variable *intent to complete,* F (7, 135) = 3.07, p = .005. At step 2, the four scale variables were entered into the equation. The total regression equation with all predictors was also significant, F (11, 121) = 1.96, p = .04. Examination of the regression coefficients revealed that the

significant predictors ($p < .05$) of intent to complete were gender ($\beta = .257$) and marital status ($\beta = .204$). As with the Pearson correlations for these variables, relatively high predicted intent of complete scores were associated with female gender and married status. The percentage of variance accounted for by the predictors for the regression equation at step 2 was $R^2 = .141$, (adjusted $R^2 = .069$). Thus, about 7% of the variance in intent to complete was associated with the predictors.

Table 41 shows that slightly more nonreverse transfer students indicated that they intended to graduate than reverse transfer students. Additionally, for both reverse and nonreverse transfer students, more females indicated that they intended to graduate than males.

Table 41

Male vs. Female Intention to Graduate

	Reverse Transfer				Nonreverse Transfer			
	Male		Female		Male		Female	
	n	%	*n*	%	*n*	%	*n*	%
Intends to graduate	35	45.5	68	58.1	124	50	233	60.5
Total	77		117		248		385	

Table 42 shows student responses on the Intent to Complete Scale (1 = *Strongly Disagree,* 6 = *Strongly Agree*). A slightly greater proportion of reverse transfer students indicated that they thought about quitting their program of study than did nonreverse transfer students, but the percentage of both groups was low. The proportion of nonreverse transfer students was more than twice that of reverse transfer students that indicated they would look for a new program the next term. The proportion of both

groups was still less than 10%. Fewer reverse transfer students indicated they would look for a new program within the next year. Conversely, more nonreverse transfer students indicated they would look for a new program within the next year.

Table 42

Intent to Complete Scale by Students

	Reverse Transfer		Nonreverse Transfer	
	n	%	*n*	%
Think about quitting (5 or 6)	9	5.2%	21	3.8%
Look for new program next term (5 or 6)	7	4.1%	49	8.9%
Look for new program within next year (5 or 6)	6	3.5%	52	9.4%
Not likely to enroll in another program (5 or 6)	73	42.2%	196	35.6%
Likely to complete program (5 or 6)	137	79.2%	407	73.9%
Total	173		551	

Summary

In summary, reverse transfer students had a gender composition of approximately 60% female, and 40% male, almost identical to the nonreverse transfer students in the study. The ethnic composition of the two groups of students was similar, with no significant differences between reverse transfer and nonreverse transfer. Both groups were approximately three quarters White and one fifth African American. Higher percentages of reverse transfer students were married, divorced, separated, or widowed than nonreverse transfer students. Approximately two thirds of reverse transfer students and four fifths of nonreverse transfer students had never been married. Over a third of reverse transfer students had dependent children at home, compared to about one quarter of nonreverse transfer students. The age of reverse transfer students was significantly

higher than nonreverse transfer students. There was no significant relationship between employment status and student group. Similar percentages of working reverse transfer and nonreverse transfer students held multiple jobs. The household income of reverse transfer students was slightly higher than nonreverse transfer students.

A higher percentage of nonreverse transfer students had parents who did not graduate from high school, completed only high school, or held a GED. Both groups had similar percentages of parents who had some college, but no degree. Approximately a third of both groups began their KCTCS enrollment in the semester of data collection. Few students enrolled in other two-year colleges before or after their initial enrollment in a KCTCS school. A significantly higher percentage of reverse transfer students, over one fifth, held previous credentials at the Associate Degree or less, however, only one reverse transfer student held a graduate degree. Both groups of students reported periods of nonattendance in college that ranged to 40 years or more. While the number of students enrolled in multiple institutions at the same time was low for both groups, the percentage of reverse transfer students who did so was significantly higher than nonreverse transfer students. A significantly higher percentage of reverse transfer students, over one third, than nonreverse transfer students had taken online courses, and at higher percentages in all except the youngest two age groups. The GPAs of reverse transfer students showed small but significant improvement over their performance in previous institutions. Less than a quarter of reverse transfer students left previous institutions in academic distress. Both groups of students chose majors in three main areas of study: health-related fields, business, and education. A significantly higher percentage of reverse transfer students

(84.2%) planned to pursue degrees that would require transfer to four-year institutions, and a smaller percentage were unsure about their future education plans.

There was significant correlation between several of the participation motivation scales, but there was no significant correlation between any of the factors and the variable Intent to Complete. Well over half of the students intended to graduate. The intention to graduate was higher for nonreverse transfer students. Analyses revealed that relatively high intent to complete scores were associated with female gender and married status. Responses on the Intent to Complete scale indicated that a higher percentage of reverse transfer students intended to complete their program plans and were more certain about their plans.

CHAPTER V

DISCUSSION

Examination of the education goals of current reverse transfer students in Kentucky provides a foundation for a discussion of legislative policies. This study examined the motivations for reverse transfer behavior and the demographic characteristics of reverse transfer students that predict the intention to complete a community college program. Throughout the literature, researchers identified the need for further study of the diverse group of students with previous college experience.

Purpose of the Study

While much research exists on the characteristics and motivations of traditional students, and some also exists on nontraditional students, very little recent research has been conducted on the reverse transfer student population. The purpose of this study was to investigate demographic characteristics of reverse transfer students, the motivations for reverse transfer behavior, and the implications this behavior has with regard to program completion. Previous studies of reverse transfer students (Brimm & Achilles, 1976; de los Santos & Wright, 1990; Harris, 1997; Heinze & Daniels, 1971; Hill-Brown, 1989; Hogan, 1986; Hudak, 1983; Kajstura & Keim, 1992; Kirby, 1977; Klepper, 1990; Lambert, 1993; LeBard, 1999; Lee, 1975; McCormick, 2003; Meadows & Ingle, 1968;

Mitchell & Grafton, 1985; Phelan, 1999; Pope et al., 2001; Quinley & Quinley, 1998; Renkiewicz, Hirsch, & Drummond, 1982; Rodrigues, 1991; Rooth, 1979; Ross, 1982; Slark, 1982; Swedler, 1983; Townsend, 1999; Winter & Harris, 1999; Winter et al., 2001) identified a number of common characteristics to use as research variables to gain a more complete picture of reverse transfer students. Of particular interest in this study are the intention of reverse transfer students to complete credentials and what predictors of completion exist in the reverse transfer population.

In the absence of national longitudinal studies, system or district studies can give a localized profile of reverse transfer students. Studies of reverse transfer students in Kentucky were conducted at approximately 10-year intervals, with this study being the third. Hogan (1986) performed a study that was very general and descriptive, giving only percentages of students in various categorical variables. Later analytical studies of reverse transfer students exist (Harris, 1997; Winter & Harris, 1999; Winter et al., 2001) that provide a historical foundation for reference. Substantial changes have taken place in the community college system since the above research was conducted with the adoption of the Kentucky Postsecondary Education Improvement Act in 1997.

Hogan's (1986) study examined reverse transfer students in 13 community colleges in Kentucky. Harris (1997) conducted a study of the reverse transfer students in the University of Kentucky Community College System consisting of 14 community colleges. The present study examined additional variables, focusing on the prediction of program completion at the community college in two KCTCS districts, Jefferson and Elizabethtown.

Postsecondary education in Kentucky underwent extensive changes in 1997 with the passage of the Kentucky Postsecondary Education Improvement Act (Kentucky Postsecondary Education, 1997). The Act removed all but one of the 14 community colleges from the jurisdiction of the University of Kentucky, and removed the 13 technical colleges from the Cabinet for Workforce Development. The colleges combined to make the Kentucky Community and Technical College System (KCTCS), a state postsecondary system independent of the public four-year institutions. This consolidation resulted in 16 districts and more than 50 campuses. In 2005, KCTCS absorbed the remaining community college, Lexington Community College. As of the fall semester of 2008, KCTCS enrolled 84,942 students in 600 programs at 16 colleges and 65 campuses (KCTCS, 2009).

The new system combined the population of community college students, with a large proportion focused on transfer, and the population of technical college students, who were primarily focused on quick transition to the workplace. Researchers have not investigated how the merger of the two student bodies has affected the reverse transfer student profile. The current student population of KCTCS contains a much larger proportion of technical students than the populations examined by Hogan (1986) and Harris (1997). As discussed in the literature (Bethune, 1977; Hillman et al., 2008; McCormick, 2003), completer reverse transfer students often return to the community college to gain specific skills to complement their formal degree, or train for careers that are easily portable. Quinley and Quinley (1998) observed that the majority of completer reverse transfer students in their study had degrees in career areas. How many of these students complete programs at the community college?

The Postsecondary Education Reform Act (1997) that created KCTCS also made a number of changes in the state university system, which included establishing the University of Louisville and the University of Kentucky as research institutions. The entrance requirements for the state universities increased, and, as of the fall of 2010, the Council on Postsecondary Education raised the entrance thresholds again. They have also increased the thresholds to avoid having to complete developmental (remedial) courses at the community colleges. The research universities had remedial education programs to prepare deficient students for college-level work before the Act was instituted, but shed those programs to the community college system. Since the formation of KCTCS, students wishing to enter the research universities, but were not prepared, were referred to the community colleges. Transfer programs were established to aid students in preparing for transfer. As a result, almost two thirds of the community college student population since 1997 has had to complete at least one developmental course. With higher entrance requirements at the universities, reverse transfer students, who may have been out of school for a while, might have found that their previous school record was no longer sufficient to gain entrance to a university or they may have found that their skills were rusty. In either instance, the community college provided the access point for the reverse transfer student to return to college.

Another contributor to enrollment increases in community colleges in general is the rapidly increasing costs associated with higher education. Since Harris' study (1997), state and private institutions in Kentucky raised their tuition almost every year. While this included community colleges, the rate at which tuition has climbed has been less steep than at four-year institutions. Community colleges remain a much less expensive path for

students to enter or continue earlier postsecondary education, and often the only one within the reach of students of low socioeconomic status.

Methodology

This study used a correlational design. Guided by theory and research, a hierarchical regression analysis was also performed to determine which characteristics are most influential in predicting program completion (Gall, Gall, & Borg, 1999). Previous literature, reviewed in Chapter II, described the research variables: Demographic Characteristics, Education Background, Motivations to Participate in Reverse Transfer Behavior, and Intent to Complete a Program of Study.

Discussion of the Results

Demographics.

Cohen and Brawer (1996) documented changes in nontraditional college student populations over a 25-year period. The changes included increases in: the mean age, the number of females attending, the number of minority students enrolled, and the number of part-time students. A variable with unknown influence is the national economy. The general observation is that community and technical colleges enjoy increases in enrollment when the national economy turns down. As more people are out of work and the job market becomes more competitive, workers turn to the community college to upgrade and refresh skills to enhance their chances of finding a job. While this study did not examine economic influences on student populations, certain lines of reasoning can lead to some assumptions. As more "breadwinners" lose their jobs or have their hours reduced, women who stayed at home to care for children may be forced to find employment. If these women had college experience, it may have been some time ago.

Their work skills may be outdated and they need refresher courses or they need to obtain new skills.

Manufacturing jobs, dominated by men, usually suffer disproportional layoffs during difficult economic times. These workers, a majority being nontraditonal, have the time and incentive to continue their education. This may skew gender and age distributions, previous education distribution, and educational goal distribution. Community colleges in geographical areas where manufacturing industries dominate may be influenced in these ways more than schools in geographical areas where manufacturing is less of a dominant employment force. In the area of Kentucky including Louisville and Elizabethtown there are several large manufacturing employers (i.e. Ford, General Electric) and secondary manufacturing suppliers. With the expansion of internet commerce, a new sector, freight and shipping, are substantial indicators of economic health. United Parcel Service (UPS) has a major sorting hub in Louisville.

Despite increased enrollment, education funding is often one of the first things cut when the government suffers reduced revenues. Primary and secondary education is usually spared at the expense of postsecondary education, and community colleges usually experience cuts long before four-year institutions. Four-year institutions have large fund-raising departments and established external funding sources. Community colleges usually do not have such support systems. In 1985 and 1986, when Hogan collected her data, the country was emerging from the serious recession of the early and mid 1980s. The unemployment rate in the Louisville area during that time was over 9%. In 1996, when Harris collected his data, the country was enjoying a period of relative prosperity. The unemployment rate in the Louisville area during that time was

approximately 5.5%. The unemployment rate in 2008, when the data collection for this study began, was over 6.5%. By the time data collection ended in early 2009, the unemployment rate reached 10.5% and the country was entering a deep recession (Workforce Kentucky, 2010). Despite yearly increases in enrollment between 2001 and 2009, many in double digits, KCTCS suffered nine budgetary cutbacks. The extent to which the state and national economic conditions influenced demographic variables is a topic for another study, but is recognized here as an external source of variability.

Gender.

While the reverse transfer student population tends to contain more males proportionately than the general student population, the increase in female students in both the general student population and the reverse transfer student population still puts males in the minority at most institutions. As was reflected in the national research, female enrollment increased between Hogan's (1986) study and Harris' (1997) study. In the present study female enrollment decreased. The reason for this is unclear. It could be that more female students were able to gain entry directly into four-year institutions, and/or were more successful there than in the past. The gender distribution of reverse transfer students and nonreverse transfer students was almost identical for this study, which deviates from the previous literature.

The number of females attending college has increased steadily over the last 50 years, and in most postsecondary institutions there are more females than males. The reason for this phenomenon is beyond the scope of this study, but perhaps educational policies in primary and secondary schools, combined with changes in United States economic structure can shed some light on the topic. Between 20 and 30 years ago many

public school systems began to focus on the academic achievement of girls. In an effort to level the playing field for girls, boys and minorities, school systems across the country began implementing programs to keep students in school and improve the performance of groups that traditionally performed at undesirable levels. Recognizing the advantages of college education, legislators also demanded that public colleges improve accessibility for everyone, but especially underrepresented groups, such as females and minorities.

Add to the mix the expectation for the "baby boom" generation and subsequent generations to have a standard of living at or above that of their parents. In most cases, the only way that expectation could be met was if there were two incomes in the family. Women over the last several decades have come to see that they no longer have to take subservient roles in the home or workplace and society has become more accepting of women in high-ranking positions. Men still receive higher pay for equivalent jobs than women, but the earnings gap has reduced over the last few decades. Females of all ages felt empowered to set anything as their life goal. While these things do not account for the number of females attending college and intending to graduate surpassing that of males, they may contribute to the increase in females participating in postsecondary education.

Ethnicity.

Throughout the literature, the ethnic composition of reverse transfer students was similar to the general student body. The proportions of ethnic minorities were similar in relation to each other as in the general student population, but with the ethnic majority comprising a larger proportion of the reverse transfer population than in the general student population. With the exception of one study (Drakulich & Karlen, 1980), the

ethnic majority was White. Unlike the changes in gender distribution, differences in ethnic composition showed no clear pattern over time. Many of the earliest studies did not examine ethnicity in the reverse transfer student population and little research exists examining the effects of ethnicity on motivations and attendance patterns.

The ethnic composition of reverse transfer students at individual institutions may be influenced more by local variables (actual location, availability of mass transit, ethnic composition of the community, community marketing and programs) than by general changes in ethnic composition of the national general population over time. Longitudinal studies at a single institution, within a single system, or at all community colleges would yield a broader picture concerning ethnicity in reverse transfer students.

The proportion of White reverse transfer students in Kentucky research declined over time from Hogan's (1986) study to the current study. The distribution of ethnic groups in the reverse transfer and nonreverse transfer student populations in the current study were similar, with the greatest differences appearing in the Hispanic and Other categories. A number of factors combine to account for the dramatic increase in the proportion of African American and other ethnic groups in both the general student population and in the reverse transfer student population. As with female students, there have been a number of programs focusing on the success of minority students in the public school systems nationwide. In Kentucky there was major school reform in 1991 aimed at reducing or eliminating the achievement gap between white and minority students. The reform has been somewhat successful in reducing the high school dropout rate and improving the number of students pursuing a college education. The first cohort

of students whose entire primary and secondary school career was under the reform would have entered college in 2003 or 2004.

Elizabethtown Community and Technical College (ECTC) draws from a relatively rural area, is a little over one third the size of Jefferson Community and Technical College (JCTC), and ethnic minorities comprise approximately one fifth of the student population. The downtown and technical campuses of JCTC, however, are in the urban center of the largest city in Kentucky. They are in close proximity to large African American populations, low socioeconomic status populations, and the greatest portion of the mass transit system. The other JCTC campuses are located in "bedroom" communities for Louisville (Shively, Shelbyville, and Shepherdsville) and have student populations that are less diverse than the downtown campuses, despite sizable minority populations in and around these communities.

In the decade since the previous study, national and local programs were instituted to increase the proportion of minorities attending college and obtaining at least a bachelor's degree. Throughout the state the Hispanic population has increased dramatically due to the abundance of jobs for unskilled and migrant workers. This is especially true in the more agricultural regions surrounding the Shelby County and Elizabethtown campuses.

Another factor is the number of students coming from foreign countries to the community college. While some come from African countries, many also come from eastern European, Central and South American, and Asian countries. Catholic ministries and other religious and nonprofit organizations have brought emigrants to the Louisville area. Some of these emigrants enter the community college because of the English as a

Second Language programs that are offered. A few of these students attended a postsecondary institution in their home countries before coming to the United States.

Marital status.

Because reverse transfer students are usually older than traditional community college students, a variety of associated issues increase in relevance. While traditional students may play a variety of roles outside that of student, the average reverse transfer student is more autonomous. The roles played by reverse transfer students usually carry far more responsibility. Reverse transfer students also usually have less extensive support systems (Carney-Crompton & Tan, 2002). Depending on the marital status of the student and the condition of the student's relationships, a reverse transfer student may have support or stressors in the home (MacKinnon-Slaney, Barber, & Slaney, 1988). The demands of supporting a family as head of household can compete for students' attention and time. A student supporting a family alone also has financial issues to manage. There does not appear to be any change in the proportion of married or single reverse transfer students over time. The rate of divorce in the general population has remained fairly steady over the last two decades, but the incidence of couples cohabitating has increased.

The proportion of married reverse transfer students remained about the same for the studies conducted by Hogan (1986) and Harris (1997), but there was a substantial drop in the proportion of divorced students. This indicates a rise in the number of students who were never married. Between the previous Kentucky studies and the present study the proportion of married reverse transfer students declined, but the proportion of divorced students remained about the same as Harris' (1997) study. This would also indicate a rise in the proportion of reverse transfer students who never married.

Dependent children.

Researchers (Carney-Compton & Tan, 2002) have given the number and ages of dependent children of reverse transfer students little attention. Because women tend to be the primary caregivers of children and other family members, it is expected that females would experience greater external family influences on the decisions to return to school, to remain in school, and to complete a credential. While most of the literature examined students in four-year institutions, the pressures of family life would be similar for women returning to any school. Almost one third of the reverse transfer students in the present study had dependent children, compared to less than one quarter of nonreverse transfer students. This is expected because of the greater age of reverse transfer students.

Age.

The increased age of reverse transfer students reflects overall trends seen in all of higher education. The average age of reverse transfer students in the literature ranged from 26 to 38 years old, all substantially above the 17 to 24 years of age typical of traditional students. The literature revealed no discernable pattern of change in average age over time.

The mean age of 28.3 years for reverse transfer students in the current study was within the 26 to 38 years age range found in the reverse transfer literature. Nearly three-quarters of the nonreverse transfer students in the present study were age 25 or less, compared to just over half of the reverse transfer students. The reverse transfer students had a greater proportion of their numbers in every age category over the age of 20 than did the nonreverse transfer students, with the exception of the 55.1-60.0 category.

With increased age come a number of other external factors that influence reverse transfer students. As mentioned before, larger proportions of reverse transfer than nonreverse transfer students were married, divorced, and widowed. A higher proportion of reverse transfer students also have dependent children. These can be positive or negative factors depending on the support systems possessed by the individual. As mentioned in the literature (Dill & Henley, 1998; Klein, 1990), older students tend to have smaller support systems, but often they are of higher quality than those possessed by younger students. One can speculate on the causes of the dramatic drop in the percentage of students in each of the age categories 30 and above for both reverse transfer and nonreverse transfer students. This drop may indicate a number of events that occur at about that time in the average person's life. By the age of 30 most individuals have reached emotional and psychological maturity. While people may be married before the age of 30, it is at about this age that people begin to seriously consider family. If they have children, the children are dependent and require significant physical, emotional, and mental attention. Students who have managed a family and full-time employment often have acquired the skills necessary to juggle the added demands of school, but they also have additional needs, such as child care and flexible scheduling. This is also a period of career development. Much of a person's attention and energy is devoted to establishing a career instead of just having a job.

Employment.

Many researchers included employment status in the demographic data they gathered to determine if the recommendations of reduced course load were warranted. What emerged from the literature is that reverse transfer students are adept at juggling the

many demands of adult life. Contrary to the observation in the literature that reverse transfer students usually worked full-time, only approximately a third of the reverse transfer students in the current study worked full time, less than the proportions of the studies by Hogan (1986) and Harris (1997). This discrepancy could come from the method of data collection. Because primarily daytime classes were volunteered to complete the survey, the percentage of students employed full time could be artificially low. There was no significant relationship between employment status and whether or not the student was a reverse transfer student. Similar proportions of working reverse transfer and nonreverse transfer students held multiple part-time jobs. Almost a quarter of the reverse transfer students in the current study, were unemployed, more than in Harris' (1997) study. This may be a reflection of the national economic condition. In 2006 and early in 2007 the local unemployment rate was close to 5.5%. By 2008 and into 2009, when the survey was administered, the local unemployment rate had increased to over 10% (Workforce Kentucky, 2010).

Income

Few researchers (Anderson & Darkenwald, 1979; Drakulich & Karlen, 1980; Kearney, Townsend, & Kearney, 1995; Lee, 1976; Rooth, 1979; Ross, 1988; Townsend, 2001) included income as a factor in their studies. Data that do exist span more than 30 years, making comparison of limited value. Adelman (2006) found that financial aid was not a significant factor in the completion of a postsecondary degree, but in his earlier research (1999) he found that a variable of significance to persistence through the first year of attendance was socioeconomic status of the students before they entered college. Once the students completed their first year of college, two or four year, socioeconomic

status made a very modest contribution toward degree completion. Adelman also found that family income played no role in the attendance patterns of low socioeconomic status students.

The distribution of income levels was similar for reverse transfer and nonreverse transfer students in the present study. For both groups of students, the largest income categories were $\leq$ \$9,999 and \$10,000 to \$14,999. Slightly higher percentages of nonreverse transfer students fell into these categories than did reverse transfer students. The mean income category for reverse transfer students was \$30,000 to \$39,999, compared to the mean income category for nonreverse transfer students of \$20,000 to \$29,999. Both student groups had over 8% of their members reporting household incomes over \$100,000. Because there was no item on the survey asking if the students lived with parents or other income sources, it is speculation that most of the nonreverse transfer students reporting household income of over \$100,000 lived with family or guardians. Because more of the reverse transfer students were older and were married, but worked part-time, it is likely that incomes over \$100,000 were most often due to substantial earnings of spouses or cohabiters.

The similarity of the demographic characteristics of reverse transfer students and nonreverse transfer students in this study could be due to the trend of the community college student population becoming less "traditional". The average age of nonreverse transfer students was 23.9, almost the 24 threshold to be nontraditional, with over 25% age 25 or older. While slightly less than half of reverse transfer students and approximately a third of the nonreverse transfer students in this study attended part time,

over half of the entire student populations at both study districts attended part-time. This is similar to trends found at community colleges across the country.

Education history.

Previous research of reverse transfer students revealed complex patterns of postsecondary attendance, involving multiple schools, both two-year and four-year institutions, online classes, and concurrent enrollment. Some researchers (Adelman, 1999a; & Kearney, Townsend, & Kearney, 1995) cited an increase in the number of students attending multiple institutions and an increase in the number of institutions attended on students' paths to their educational goals. Students in the present study did not exhibit the complex patterns described in the literature.

Parents' education.

Despite attention that has been paid to family educational level, Adelman (1999) found the data uneven and unreliable when reported by students. On national longitudinal studies one out of six students did not even guess at the education level of their parents.

The JCTC institutional research office (KCTCS, 2009) reports that the community college student population contains a large proportion of students who are the first in their family to attend college. The largest group of both reverse transfer and nonreverse transfer students in the current study had parents with a high school education or GED. The next largest group had parents who had some college, but no degree. The third largest group had parents with a Bachelor's degree. A greater proportion of nonreverse transfer students than reverse transfer students had parents who did not complete high school, who had graduated from high school, or who had a GED. Both groups had similar proportions of parents who had some college, but no degree. Reverse

transfer students had similar proportions of mothers and fathers with vocational credentials, while nonreverse transfer students had a greater proportion of fathers with vocational credentials but a smaller proportion of mothers with vocational credentials. This may indicate that more reverse transfer students than nonreverse transfer students come from families in which education is valued or seen as an advantage.

Prior education.

Initial enrollment.

Slightly fewer reverse transfer students began their KCTCS enrollment in the Fall 2008 semester than nonreverse transfer students. Few students enrolled in other two-year colleges before or after their initial enrollment in a KCTCS school. Both reverse transfer and nonreverse transfer students who enrolled in other schools did so mainly before their initial enrollment in a KCTCS school. This contrasts with the claims in the literature (Andrews, 2001; Kearney, Townsend, & Kearney, 1995; Kraus, 2004; Peter & Cataldi, 2005; Quinley & Quinley, 1998b) that reverse transfer students have complex attendance patterns including many schools.

Institutions.

While the proportion of reverse transfer students in the student population in the present study was consistent with previous research there was little evidence of complex patterns of multiple institution attendance. Reverse transfer students had, by definition, attended a four-year institution prior to attending the community college, and some in the present study also attended other two-year colleges or proprietary schools. Fewer nonreverse transfer students attended multiple institutions. This is not surprising because reverse transfer students are older and had more time in which to have a longer and more

complex educational career. Unlike the previous literature, the four-year institutions reverse transfer students in the present study attended were primarily state institutions in Kentucky. The vast majority attended the University of Louisville, University of Kentucky, Western Kentucky University or Eastern Kentucky University.

Previous education.

It is difficult to get an accurate picture of the overall educational status of reverse transfer students from the literature. What can be discerned from previous research (Mitchell & Grafton, 1985; Quinley & Quinley, 1998a; Rooth, 1979; Ross, 1982; Slark, 1982; Winter & Harris, 1999) is that noncompleters out number completers. The literature shows that large proportions of reverse transfer students have entered the community college after completing degrees at four-year institutions. Less than 10% of nonreverse transfer students in the current study held previous credentials at the Associate Degree level or less compared to more than 20% of reverse transfer students. Contrary to previous literature, only one of the reverse transfer students in the current study held a graduate degree.

Period of Non-attendance.

The literature indicated that often reverse transfer students return to college many years after their initial college experience. Nonreverse transfer students in the current study also had periods of non-attendance, however the length of the hiatus tended to be shorter than reported by reverse transfer students. While the average hiatus length was greater for reverse transfer students than for nonreverse transfer students, the numbers require interpretation. The majority of students in both groups enrolled in courses immediately after leaving their last institution, but some waited a very long time to return

to school. A slightly higher proportion of reverse transfer students entered the community college within five years of leaving their last institution compared to nonreverse transfer students. This contrasts with results of other studies. Almost a third of reverse transfer students and close to half of nonreverse transfer students did not answer the question on the survey. This could have been due to some confusion about what the question was asking or it could indicate that the student did not wait before entering the present institution. Of all the items on the survey, the question asking how long the student waited before entering their current institution elicited the greatest number of questions as the students completed the survey.

Course Load.

As the community college population has increased in age, so has the life demands and responsibilities that accompany increased age. Because reverse transfer students tend to be older than the general community college population, and more of them have families and greater work responsibilities (Fischer et al., 1975; Rooth, 1979; Kajstura & Keim, 1992; Harris, 1997; Townsend, 2003), it is not surprising that reverse transfer students in the literature took fewer credit hours per term. The proportion of all community college students attending part-time has increased over time and now exceeds 60% in many schools (KCTCS, 2009; Quinley & Quinley, 1998a). However, reverse transfer students in Kentucky studies have increasingly attended full-time. Despite the increase in full-time attendance of reverse transfer students in the present study, the proportion of reverse transfer students attending full-time was still substantially less than the proportion of nonreverse transfer students attending full-time. In addition, a greater proportion of reverse transfer students enrolled in more than 15 credit hours than

nonreverse transfer students. These results are quite different than those reported by both Jefferson Community and Technical College (JCTC) and Elizabethtown Community and Technical College (ECTC). The percentages of full-time students attending both districts are reported to be lower than those attending part-time, with part-time enrollment at JCTC reaching almost two thirds. The discrepancy could reflect bias in the data collection process. Because the majority of classes that were volunteered for the survey met during the day, the number of full-time students would be higher than the average for the entire district.

Since the early research of reverse transfer students, the literature indicated that students participated in concurrent enrollment at multiple institutions with more frequency over time. A reverse transfer student may have an attendance history that includes many institutions, both two-year and four-year, as well as virtual universities. Recent technologies, such as online classes and interactive video, and cooperative enrollment arrangements have facilitated this change. With the proximity of the University of Louisville, and the many agreements JCTC has with the university, concurrent enrollment was not unusual.

Reverse transfer students enrolled in multiple institutions concurrently at a greater rate than nonreverse transfer students. Also in keeping with the literature, a greater proportion of reverse transfer students than nonreverse transfer students enrolled in online courses. In informal conversations with students who took online courses, they indicated that they did so to increase the rate at which they progressed through courses at the community college, because often the courses they needed filled before they could

enroll, or because the needed course was not offered at the local district in the semester they needed it.

The current study revealed that, except in the youngest two age groups and the 40.1-45.0 age group, a greater proportion of reverse transfer students enrolled in online classes than did nonreverse transfer students. Most of the reverse transfer students who took online courses were between 20 and 30 years of age, compared to less than 25 for nonreverse transfer students. This also reflects the greater age of reverse transfer students. Despite speculation that, because reverse transfer students are older, they would be less adept or comfortable with the online environment, more reverse transfer students enrolled in online classes than nonreverse transfer students. This may indicate that the desire of reverse transfer students to continue their education is stronger than their reluctance or discomfort with the online environment. It could also indicate that online interaction has become so pervasive in daily life that comfort with the online environment is no longer a substantial issue.

Household income and type of employment may also play a part in the frequency with which students enroll in online courses. Because nonreverse transfer students were more likely to have household incomes below $15,000 per year, they would also be less likely to have internet access at home. Reverse transfer students, because they were older, would be more likely to have work experience that would allow them to have the types of jobs that would afford them internet access at work if they did not have it at home. Internet access is readily available on campus, but if students are taking all online courses, it may not be convenient to come to campus for that access.

Classroom environment.

Many of the comments on the surveys indicated that the students chose to attend the community college because of the classroom environment and convenient scheduling. They often mentioned that the class sizes were smaller than at the university and the faculty members were more approachable and willing to work with students. These comments came from both reverse and nonreverse transfer students. Some reverse transfer students indicated that they chose to enter the community college as a way to "ease back into school" after being out for a while. This suggests that they find the community college setting less intimidating than that found at the four-year institutions. In agreement with the literature, there were a few students in the current study that took their time in class very seriously, and felt that the time spent completing the survey was an imposition on their time to learn.

Academic performance.

One of the major niches of community colleges is the rescue or "second chance" they afford students who have less than exemplary academic records. Many reverse transfer students were unable to succeed at the four-year institution for one reason or another. Community colleges provide opportunities for such students to gain self-confidence while repairing their academic records. Often, when they come to the community college, they are determined to achieve academic goals and they demonstrate equal or better performance than students who began at the community college. Similar to results of other studies, the grade point averages (GPAs) of reverse transfer students in the present study showed a small, but significant, improvement over their GPAs in previous institutions. The distribution of the grades showed that almost a quarter of

reverse transfer students were in academic distress when they left their previous institutions, less than the approximate one third found in the literature. Unlike some studies (Townsend, 2000) reverse transfer students did not perform better than nonreverse transfer students.

Programs of study.

Some researchers found that reverse transfer students changed their general area of study when they entered the community college, while others found that reverse transfer students pursued areas of study similar or related to the area they studied at the four-year institution. Some researchers observed a segment of the reverse transfer student population that did not pursue a particular area of study, but sampled many diverse areas either through curiosity, personal interest, or to explore the possibility of a career in an area much different from the career they had. Students who had retired and expressed a desire to keep active and mentally fit often fell into the latter category.

In the present study, over half of reverse transfer students had declared a major, and a quarter indicated they planned to declare a major. Significantly fewer nonreverse transfer students had declared a major, and more were planning to declare a major. Almost a quarter of reverse transfer students and nearly a third of nonreverse transfer students indicated they were undecided or did not respond. Both reverse transfer and nonreverse transfer students clustered around three main areas of study: health-related fields, business, and education. These occupational areas are understandable choices because they tend to be stable, portable, and have relatively reliable opportunities for employment.

Educational plans.

Reverse transfer students have a wide range of ultimate goals that shape their reasons for participating in reverse transfer behavior. A student who wishes to obtain a bachelor's degree may have different reasons for attending a community college than a student who wants to begin a second career or a student who wants to learn about new things.

Students wishing to begin a new career may find that previous credentials are insufficient to gain the desired level of employment. Beyond obtaining new skills or upgrading old ones, older students making a career change may also need to obtain additional credentials. Well over three quarters of reverse transfer students in the present study intended to pursue degrees that would require transfer to a four-year institution. This contrasts with a little over two thirds of nonreverse transfer students. Just over 10% of reverse transfer students intended to stop at an Associate Degree, compared to almost a quarter of nonreverse transfer students. While there were no significant differences in the proportions of reverse transfer and nonreverse transfer students who planned to continue their education past their current school, a slightly larger proportion of nonreverse transfer students were uncertain.

In addition to differences between reverse transfer and nonreverse transfer students in their intention to graduate, there were differences between males and females. Not only is the percentage of females higher for both reverse transfer and nonreverse transfer students, a higher percentage of females indicated that they intended to graduate than males.

Participation motivation

A factor analysis of the items on the Participation Motivation Scale, using just the reverse transfer students, revealed four factors. These factors were labeled Self Improvement, Practicality, Vocational/Career, and Transfer and accounted for over half of the total variance. There was significant correlation between several of the factors: Self Improvement and Practicality, Self Improvement and Vocational/Career, Self Improvement and Transfer, Practicality and Vocational/Career, Practicality and Transfer, and Vocational/Career and Transfer. There was no significant correlation between any of the factors and Intent to Complete.

Participants had the opportunity to give additional information concerning their reasons for their reverse transfer behavior in an open-ended question. Of those who responded, the majority repeated one of the choices from the list that was given, and a few used the opportunity to register a complaint about a student service office. Reverse transfer students tended to give pragmatic reasons (ability to work, ability to be close to home, to make a better life for family) for attending the community college, while nonreverse transfer students gave primarily financial reasons.

Intent to complete

Keeping in mind that less than 10% of all community college students nationally enroll with the intention of earning an associate degree, either to transfer or as a terminal credential (Palmer, 1990), the number of students that intend to complete an associate degree at any time is a small proportion of the student population. Contrary to Palmer's (1990) study, well over half of the students in the present study intended to graduate from their current school. Further analysis revealed a significant relationship between gender

and the intent to complete the program of study. The relationship was still significant when gender was adjusted for marital status (married, not married). This means that, according to the results of this study, females have a stronger intention to complete their program of study.

Student responses on the Intent to Complete Scale (1 = *Strongly Disagree,* 6 = *Strongly Agree*) showed that a slightly greater proportion of reverse transfer students indicated that they thought about quitting their program of study than did nonreverse transfer students, but the percentage of both groups was low. The proportion of nonreverse transfer students was more than twice that of reverse transfer students that indicated they would look for a new program the next term. The proportion of both groups was still less than 10%. Fewer reverse transfer students indicated they would look for a new program within the next year. Conversely, more nonreverse transfer students indicated they would look for a new program within the next year.

Implications for Policy and Practice

Data collection and policy analysis are essential features of an effective transfer and articulation system. The results of this study indicate that two-year institutions must work with four-year institutions to facilitate both the sending and receiving ends of transfer. Institutions need to develop multidirectional transfer policies and agreements to ensure that credits remain intact. Educational systems need to adopt a more comprehensive approach to include transfer and articulation in multiple directions. Measures of institutional effectiveness need to encompass more than just traditional graduation rates. Performance measures should recognize the mobile nature of postsecondary students. Institutions and state systems need to develop compatible

systems to track student movements and progress. Student tracking and data collection from institution to institution and within institutions is of greater importance as student attendance patterns become more mobile and complex. Accrediting agencies and state legislatures also need to recognize the changes in student attendance patterns. These changes influence school accreditation and government funding.

Kentucky community colleges are taking steps to recognize the many demands on students' time by offering increasing numbers of online courses and in-house child care. Nation-wide, community colleges are feeling the crunch of increasing student enrollment and insufficient funds to physically expand. Some offer classes 24 hours a day, seven days a week. At the study institutions, courses are limited to 14 hours a day and few are offered on weekends. Members of the administration have voiced willingness to expand the school day and week if instructors can be found and if students would fill the classes. In the meantime, there is increasing reliance on online courses to expand offerings. The increased flexibility that online offerings allow is attractive to many. These courses allow both students and instructors to time-shift their work load to accommodate their busy lives. As revealed in this study, reverse transfer students find online classes a means to their educational goals, and they readily participate in the virtual educational environment.

Conclusions

Given that the "typical" community college student is no longer "traditional", perhaps it is time that administrators, legislators, and others re-examine postsecondary educational models and student profiles. Institutions are wrestling with questions about how to define "home school" and who gets credit for the graduating student. Accountability is of utmost concern at colleges nationwide. Maybe definitions and

effectiveness measures need to be changed and/or standardized to reflect modern student movement patterns. "When nearly 60 percent of undergraduates attend more than one institution and 40 percent of this group do not complete degrees, institutional graduation rates are not very meaningful. It is not wise to blame a college with superficially low graduation rates for the behavior of students who swirl through the system."(Adelman, 1999, p. ix) The attendance patterns exhibited by today's postsecondary students make it vital that compatible and consistent reporting systems, definitions, and methods of calculation exist. Many states do not use their information systems to their full potential. Besides the issue of compatible information technology infrastructure, consistent definitions for many types of students and activities are necessary for education researchers and policy makers to fully understand the questions at hand. Researchers need to continue to study attendance patterns to discern why the patterns developed and how best to measure and address them. Despite the differences between reverse transfer students and nonreverse transfer students, many of the measures to accommodate, retain, and successfully graduate reverse transfer students would benefit both groups. Qualitative research of reverse transfer students would give additional insights into specific problems they encounter and ways the community college can improve graduation rates of this group.

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Appendix A

Program of Study of Reverse Transfer Students in Previous Literature

	Fischer, Kellerman, & Odom 1975		Rooth 1979		Ross 1982		Slark 1982		Hill-Brown 1989			Harris 1997			Quinley & Quinley 1998
	2-yr college	4-yr college	2-yr college	4-yr college	2-yr college	4-yr college	CRT	NCRT	CRT	delayed RT	immediate RT	CRT	NCRT	RT	CRT
agriculture/ forestry	1.2%	0.3%													
horticulture															1.4%
arts & humanities	9.0%	10.4%	16.7%				0.6%	3.3%	2.0%		2.0%				
theatre arts			24.4%				0.6%	1.7%							
commercial art								1.7%							
accounting					7.0%	19.0%				3.0%					
transfer accounting									2.0%	4.0%	3.0%				
business technology												2.4%	12.7%	11.8%	
business administration	25.9%	22.9%	30.2%	12.8%			10.9%	16.7%	2.0%	5.0%	2.0%				2.9%
transfer business administration									3.0%	11.0%	12.0%				
office administration												0.0%		3.7%	
secretarial							1.1%	1.7%		2.0%	2.0%				

Appendix A

Program of Study of Reverse Transfer Students in Previous Literature (cont.)

	Fischer, Kellerman, & Odom 1975		Rooth 1979		Ross 1982		Slark 1982		Hill-Brown 1989			Harris 1997			Quinley & Quinley 1998
	2-yr college	4-yr college	2-yr college	4-yr college	2-yr college	4-yr college	CRT	NCRT	CRT	delayed RT	immediate RT	CRT	NCRT	RT	CRT
computer information systems									2.0%	3.0%		19.0%	8.5%	9.6%	5.3%
computer science							4.0%	5.0%	5.0%	4.0%	3.0%				
data processing					9.0%	29.0%			5.0%	3.0%					
communications							0.6%								
biology			3.9%	6.6%			0.6%								
chemistry								1.7%							
science								1.7%							
education	6.4%	11.0%	6.6%	23.6%											
English			1.9%	6.6%			2.9%	8.3%							
library							1.7%								
math							0.6%								
electrical engineering							1.7%			3.0%					2.2%
engineering technology	18.9%	19.5%							2.0%			0.0%	6.6%	5.9%	
electronics							5.2%	8.3%	3.0%						1.3%
journalism															

Appendix A

Program of Study of Reverse Transfer Students in Previous Literature (cont.)

	Fischer, Kellerman, & Odom 1975		Rooth 1979		Ross 1982		Slark 1982		Hill-Brown 1989			Harris 1997			Quinley & Quinley 1998
	2-yr college	4-yr college	2-yr college	4-yr college	2-yr college	4-yr college	CRT	NCRT	CRT	delayed RT	immediate RT	CRT	NCRT	RT	CRT
justice administration/ law enforcement	3.0%	0.9%					3.4%	5.0%							
law															4.5%
legal assistant							1.1%								
court reporting								1.7%							
family & consumer							1.1%								
human development							0.6%	1.7%							
pharmacy							0.6%								
paramedic							1.7%								
medical or dental technology	13.7%	11.0%					0.6%	3.3%				4.8%	4.5%	4.5%	
nursing					3.0%	27.0%	8.6%	5.0%				57.1%	13.6%	18.5%	
transfer nursing										2.5%	4.0%				2.2%
physical therapy			1.6%	3.5%							2.0%				
respiratory therapy					19.0%	53.0%									
psychology								1.7%			3.0%				
occupational therapy			25.6%	5.0%											1.1%
political science								1.7%							

Appendix A

Program of Study of Reverse Transfer Students in Previous Literature (cont.)

	Fischer, Kellerman, & Odom 1975		Rooth 1979		Ross 1982		Slark 1982		Hill-Brown 1989			Harris 1997			Quinley & Quinley 1998
	2-yr college	4-yr college	2-yr college	4-yr college	2-yr college	4-yr college	CRT	NCRT	CRT	delayed RT	immediate RT	CRT	NCRT	RT	CRT
real estate							2.3%	1.7%							
human services							1.1%								
industrial manufacturing related															1.5%
machine shop							0.6%								
auto technology							0.6%								
diesel							0.6%								
carpentry								1.7%							
cosmetology							1.1%								
fire technology							8.6%	6.7%							1.2%
technical			8.1%	1.2%											
liberal arts							5.7%	5.0%							
transfer											3.5%	4.8%	31.4%	28.4%	
undecided									7.0%	9.0%	12.0%				
other	13.4%	15.5%					25.3%	15.0%				11.9%	18.5%	17.6%	
not reporting									50.0%	20.0%	19.0%				

Appendix B

Gender Distribution of Reverse Transfer Students in the Kentucky Literature and in the Present Study

	Hogan	Harris	Present Study
Gender			
Male	41.6%	33.6%	39.8%
Female	58.4%	66.4%	60.2%

Appendix C

Ethnicity of Reverse Transfer Students in the Kentucky Literature and in the Present Study

	Hogan	Harris	Present Study
White	92.3%	88.1%	72.8%
African American	6.6%	8.9%	22.6%
Other	1.1%	3.0%	4.5%

Appendix D

Marital Status of Reverse Transfer Students in the Kentucky Literature and in the Present Study

	Hogan 1986		Harris 1997	Present study	
	RT	NRT	RT	RT	NRT
Single			51.5%	66.8%	81.7%
Married	38.3%	21.7%	38.2%	23.5%	11.3%
Divorced	13.0%	8.0%	7.6%	7.1%	4.7%
Separated			1.6%	1.0%	0.8%
Widowed			1.0%	1.5%	0.3%

Appendix E

Age of Reverse Transfer Students in the Kentucky Literature and in the Present Study

	Hogan	Harris	Present Study
Age			
≤ 25	50.6%	34.1%	52.9%
> 25	49.4%	65.9%	47.1%
Mean	26.7	30.7	28.3

Appendix F

Employment Status of Reverse Transfer Students in the Kentucky Literature and in the Present Study

	Hogan	Harris	Present Study
Full-Time	43.7%	47.5%	33.7%
Part-Time	22.2%	31.9%	42.3%
Unemployed	18.6%	20.3%	21.4%

Appendix G

Household Income by Gender in the Current Study

	RT				NRT			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
≤ $9,999	10	12.8	20	16.9	41	16.4	96	24.9
$10,000-14,999	12	15.4	7	5.9	37	14.8	51	13.2
$15,000-19,999	6	7.7	10	8.5	21	8.4	25	6.5
$20,000-29,999	9	11.5	13	11.0	20	8.0	44	11.4
$30,000-39,999	2	2.6	8	6.8	17	6.8	30	7.8
$40,000-49,999	2	2.6	12	10.2	15	6.0	26	6.8
$50,000-59,999	7	9.0	11	9.3	10	4.0	19	4.9
$60,000-74,999	10	12.8	12	10.2	18	7.2	23	6.0
$75,000-99,999	4	5.1	8	6.8	13	5.2	8	2.1
$100,000-119,000	7	9.0	3	2.5	8	3.2	9	2.3
≥ $120,000	6	7.7	3	2.5	24	9.6	15	3.9
no report	3	3.8	11	9.3	26	10.4	39	10.1
Total	78	39.8	118	60.2	250	39.4	385	60.6

Appendix H

Institutions Attended by Students in the Present Study

			RT		NRT	
			N	%	N	%
2-yr college						
	In-State					
		Academy of Dental Assisting, KY	1	5.9		
		Bowling Green Tech, KY			1	2.3
		Brown Mackie, KY			1	2.3
		cosmetology, KY?	1	5.9		
		Decker College, KY			1	2.3
		Donta's Beauty School, KY			1	2.3
		Hair Design School, KY	1	5.9	3	6.8
		ITT Tech, KY			1	2.3
		Jefferson State Vocational, KY			2	4.5
		Job Corp, KY			1	2.3
		Lexington Community College, KY			2	4.5
		Lincoln Tech, KY			1	2.3
		Louisville School of Massage, KY			1	2.3
		Louisville Technical Institute, KY	3	17.6	3	6.8
		Millcreek Vocational School, KY			1	2.3
		National College of Business and Technology, KY			7	15.9
		Spencerian, KY	1	5.9	4	9.1
		Watterson College, KY	1	5.9	2	4.5
	Total		8	47.1	32	72.7
	Out-of-State					
		Abraham Baldwin College, GA	1	5.9		
		Big Bend Community College, WA			1	2.3
		California Paramedical, CA	1	5.9		
		Co-Lin Community, MS			1	2.3
		H Community College ?, out of state	1	5.9		
		Hinds Community, MS			1	2.3
		Houston Community College, TX			1	2.3
		Ivy Tech, IN	2	11.8		
		John Wood Community College, IL			1	2.3
		Kansas City Kansas Community College, MO			1	2.3
		military medical training	1	5.9		
		Mississippi Gulf Coast Community College, MS			1	2.3

			RT		NRT	
			N	%	N	%
2-yr college						
	Out-of-State (cont.)					
		Moraine Valley Community College, IL	1	5.9		
		Nursing/ data entry			1	2.3
		Paris Junior College, TX	1	5.9		
		RETS, IN			2	4.5
		Riverside Community College, CA			1	2.3
		S Community College, ?	1	5.9		
		Springfield Joint Vocational, OH			1	2.3
	Total		9	52.9	12	27.3
Total			17		44	
4-yr college						
	In-State					
		American Military University, online	1	0.5		
		Amridge University, online	1	0.5		
		Baker College, online	1	0.5		
		Bellarmine University, KY	2	1.0		
		Berea College, KY	1	0.5		
		Campbellsville University, KY	3	1.5		
		Eastern Kentucky University, KY	17	8.6		
		Kentucky State University, KY	3	1.5		
		Lindsay Wilson College, KY	3	1.5		
		Midway College, KY	2	1.0		
		Morehead State University, KY	4	2.0		
		Murray State, KY	1	0.5		
		Northern Kentucky University, KY	1	0.5		
		Park University, KY	1	0.5		
		Spalding University, KY	8	4.0		
		St. Catharine College, KY	1	0.5	1	20.0
		Sullivan University, KY	9	4.5	2	40.0
		Transylvania University, KY	1	0.5		
		University of Kentucky, KY	14	7.1		
		University of Louisville, KY	56	28.3		
		Western Kentucky University, KY	30	15.2		
	Total		160	80.8	3	60.0

			RT		NRT	
			N	%	N	%
4-yr college						
	Out-of-State					
		Augustana College, SD	1	0.5		
		Austin Peay State University, TN	1	0.5		
		Ball State University, IN	2	1.0		
		Central Michigan University, MI	1	0.5		
		Cincinnati Christian University, OH	1	0.5		
		City College, Gainesville, FL			1	20.0
		City University of New York, NY	1	0.5		
		Hunter College, NY	1	0.5		
		Indiana University, IN	4	2.0		
		I State University ?, out of state	1	0.5		
		Indiana University - Purdue, IN	1	0.5		
		Indiana University - South Bend, IN	1	0.5		
		Kansas City Art Institute, MO	1	0.5		
		Marian College, IN	1	0.5		
		Maryland University, MD	1	0.5		
		Michigan State University, MI	1	0.5		
		Milligan College, TN	1	0.5		
		Missouri Southern, MO	1	0.5		
		National University of Colombia, Bogota, Columbia	1	0.5		
		Purdue University, IN	2	1.0		
		Rose-Hulman Institute of Technology, IN	2	1.0		
		South Eastern LA University, LA	1	0.5		
		St.John's University, NY	1	0.5		
		Underwood University, online	1	0.5		
		University of Advancing Technology, AZ	1	0.5		
		University of Alabama, AL	1	0.5		
		University of Bangalore (India)	1	0.5		
		University of Illinois at Chicago, IL	1	0.5		
		University of North Carolina, NC	1	0.5		
		University of North Dakota, ND	1	0.5		
		University of Rhode Island, RI	1	0.5		
		Virginia College, VA			1	20.0
		Virginia Tech, VA	1	0.5		
		Wake Forest University, NC	1	0.5		
	Total		38	19.2	2	40.0
Total			198		5	

Appendix I

Length of Hiatus of Students in the Present Study

	RT		NRT	
No hiatus	54	27.6%	188	29.6%
1 semester	12	6.1%	20	3.1%
1 year	13	6.6%	31	4.9%
1.5 years	2	1.0%	6	0.9%
2 years	13	6.6%	22	3.5%
2.5 years	0	0.0%	1	0.2%
3 years	3	1.5%	10	1.6%
4 years	4	2.0%	6	0.9%
5 years	4	2.0%	6	0.9%
6 years	5	2.6%	4	0.6%
7 years	3	1.5%	9	1.4%
8 years	2	1.0%	4	0.6%
9 years	3	1.5%	2	0.3%
10 years	4	2.0%	4	0.6%
11 years	1	0.5%	2	0.3%
12 years	1	0.5%	5	0.8%
13 years	0	0.0%	1	0.2%
14 years	0	0.0%	1	0.2%
15 years	1	0.50%	5	0.8%
16 years	1	0.5%	0	0.0%
17 years	0	0.0%	2	0.3%
18 years	1	0.5%	2	0.3%
19 years	0	0.0%	2	0.3%
20 years	3	1.5%	5	0.8%
21 years	1	0.5%	0	0.0%
23 years	1	0.5%	1	0.2%
24 years	0	0.0%	1	0.2%
25 years	1	0.5%	0	0.0%
27 years	1	0.5%	1	0.2%
28 years	0	0.0%	1	0.2%
29 years	1	0.5%	0	0.0%
33 years	0	0.0%	1	0.2%
40 years	1	0.5%	0	0.0%
46 years	0	0.0%	1	0.2%
No report	60	30.6%	292	45.9%
Total	196		636	

Appendix J

Enrollment Status of Reverse Transfer Students in the Kentucky Literature and in the Present Study

Enrollment Status	Hogan	Harris	Present Study
Full-Time	34.0%	37.1%	55.6%
Part-Time	66.0%	62.8%	43.4%

Appendix K

Grade Point Average by Ethnicity in the Present Study

	RT			NRT		
Ethnicity	N	Avg. GPA before	Current Avg. GPA	N	Avg. GPA before	Current Avg. GPA
White	142	2.70	2.83	449	3.11	3.11
African American	44	2.72	2.99	114	2.85	2.95
Asian	3	3.17	2.75	10	3.42	3.01
Hispanic	3	2.83	2.6	20	2.88	3.08
Native American	0			3	3.85	2.70
Other	3	3.1	3.52	35	2.98	3.06

Appendix L

Programs of Study for Students in the Present Study

	RT		NRT	
	N	%	N	%
accounting	4	2.0%	8	1.2%
advertising design			1	0.1%
allied health			1	0.1%
anthropology	1	0.5%	1	0.1%
architecture			2	0.3%
art	1	0.5%	7	1.0%
art history			1	0.1%
Associate of arts	2	1.0%	7	1.0%
Associate of science	2	1.0%	9	1.3%
Associate of applied science			1	0.1%
auto mechanics	1	0.5%		
auto technology	1	0.5%	2	0.3%
aviation maintenance			3	0.4%
biochemistry			1	0.1%
biology			13	1.9%
biomedical technology	1	0.5%		
business	12	5.9%	34	5.0%
business administration	3	1.5%	8	1.2%
business management	8	3.9%	14	2.1%
business office systems	1	0.5%		
CADD			1	0.1%
CAN			1	0.1%
chemistry			1	0.1%
commercial art	1	0.5%	5	0.7%
communications	9	4.4%	2	0.3%
computer engineering			2	0.3%
computer information systems			10	1.5%
computer science	1	0.5%	4	0.6%
criminal justice	1	0.5%	14	2.1%
dental hygiene	5	2.5%	8	1.2%
dentist			4	0.6%
education	21	10.3%	53	7.9%
electrical engineering			1	0.1%
electrical technology			1	0.1%
engineering			7	1.0%
English			6	0.9%
equine business			2	0.3%
exercise science	1	0.5%		
expressive therapies	1	0.5%		

	RT		NRT	
	N	%	N	%
fashion design			1	0.1%
finance	1	0.5%	1	0.1%
fire science			1	0.1%
general education	2	1.0%	1	0.1%
geology			2	0.3%
German	1	0.5%		
health	1	0.5%	1	0.1%
history			2	0.3%
human resources	1	0.5%	7	1.0%
human services	3	1.5%	9	1.3%
IECE			3	0.4%
information technology			5	0.7%
industrial maintenance			1	0.1%
interior design			2	0.3%
ISC Honors			1	0.1%
journalism	1	0.5%	2	0.3%
justice administration/ law enforcement	1	0.5%		
machine tool technology	2	1.0%	5	0.7%
marketing	3	1.5%	3	0.4%
math	1	0.5%		
mechanical engineering			2	0.3%
medical assisting			1	0.1%
medical coding			1	0.1%
medical information technology			1	0.1%
music			4	0.6%
nuclear medicine			1	0.1%
nursing	41	20.1%	94	13.9%
occupational therapy	1	0.5%	2	0.3%
paralegal			1	0.1%
pharmacy technology	1	0.5%	8	1.2%
photography			3	0.4%
physical therapy	5	2.5%	8	1.2%
political science			3	0.4%
pre-pharmacy	1	0.5%	6	0.9%
psychology	5	2.5%	11	1.6%
public relations			1	0.1%
quality management			1	0.1%
radiology	2	1.0%	13	1.9%
real estate			3	0.4%
respiratory care	1	0.5%	1	0.1%
social services			2	0.3%
social work	1	0.5%	1	0.1%
sociology			2	0.3%

	RT		NRT	
	N	%	N	%
sonography	1	0.5%	3	0.4%
theatre arts			4	0.6%
transfer	1	0.5%	3	0.4%
transfer biology			1	0.1%
transfer business administration			2	0.3%
transfer computer science			1	0.1%
transfer finance			1	0.1%
transfer law			1	0.1%
veterinarian			2	0.3%
undecided	2	1.0%	5	0.7%
no report	48	23.5%	200	29.6%
Total	204		675	

Appendix M

Additional Reasons for Attending the Community College Given by Study Participants

Reverse Transfer Students	
	Academics, personal growth
	ADN Nursing program
	after being out of the classroom environment for 15+ yrs... very nervous. Nice transition back in.
	Best way to attain my goal of graduating from 4 year college
	Better chance at getting accepted into the nursing program
	Both of my parents are terminally ill and I needed a college where I could still advance, but stay close to home to fulfill my family obligations.
	Bring my GPA up.
	campus size & familiarity of the campus area
	Cheap
	class size; small campus
	cost at WKU plus failing GPA lead me back home & to here.
	cost; night classes
	Earn more credits at a cheap rate and transfer to UofL
	Everyone who went to JCC works with me at the hospital, and tells me of how good they are because of classes at JCC
	faculty are wonderful!
	Finances
	Financial
	Gave me a second chance after being on academic probation
	get a better education
	get some training/ education about long-time hobby
	Good X-ray school
	Grow as a person and be professional
	had program I need & close to home
	I --- solve & achieve my goals; the school has met my expectations
	I currently pay out-of-state tuition, so the difference between JCC and UofL is $7000 a semester
	I get my associates this semester, & I'm transferring to UofL.
	I graduated with a BFA from a liberal arts school and after a few years as a artist/ educator, I needed to get half a dozen prerequisites for a masters in Ed. At UofL. I work full time and teach part time, so here I am.
	I had to go here (last second option)
	I needed to remain in school so that my student loans would stay in a forebearance state until I start medical school
	I needed to start off slow since I've been out of school for so long
	I screwed up my education at UK, I need to "rebuild" before going back to another university.

	I want a 4 year degree in Business Fianace
	I want to become a nurse
	Improve financially & comtribute to society
	Improve my life
	In transition
	Independence
	interesting classes at convenient times that would transfer
	It fit my situation at the time
	It was cheaper than my last school
	It was close to home & I can afford it
	It was mainly close to campus and price
	It's a state college & with my benefits tuition is covered
	I've been out too long & I feel more prepared
	JCC is closer to my family. I have more social support.
	Job needs
	Just the low cost & close to home
	low pay for the college classes
	Metro College through UPS paid for me to come here fefore attending UofL. I decided to pursue ADN vs. Transfer
	my children
	needed smaller class sizes rather than big at the University of Louisville
	no other choice
	none
	only local school with this program
	parents
	Personal growth. Better future for myself and my child.
	Personal growth; course times fell into schedule/ hectic lifestyle was accommodating
	prep for workplace
	Price and place
	primarily financial purposes
	programs here are not offered at many locations.
	quickest means to an end
	raise grades to transfer back to university
	schedule, price, & location
	scholarship
	size of UofL was too big right off coming from a small HS
	Small class sizes & the cost
	so I can get a better GPA
	started engineering school, wasn't into it like I thought, ended up doing poorly, so now I've enrolled here under something new.
	summer classes
	suspended from UofL academically. Must gain readmission by first proving that I can attain good grades here
	The ability to work and go to school

	The classes do seem a little smaller
	The community college offered more support than the university I attended did.
	the speed of 2 yr RN program & accreditation
	They are already covered in survey!
	This is (machine tool tech.) the way of the future
	time to begin a better career
	To complete requirements needed to enroll in graduate school
	to help me figure out what I want to major in
	to make money
	To take all classes I can before transferring. (lower tuition here)
	Transfer student from out of state. Will be attending UofL next semester.
	UL messed up my path
	ULTRA
	You've covered them!
Nonreverse Transfer Students	
	$$MONEY$$ I do not want to be in debt!!
	?I turn close to move and affordable
	21-month radiology associate degree program
	a good place to get started when you're still undecided
	academic, preparing for my future
	Activities and dance programs
	all are covered in above questions
	all were basically answered
	Always have been friendly and is quick to offer a hand if needed
	attended JCC in the past
	B/c I wanted 2 get used to college b/4 transferring to UofL & the cost is much better for my family
	Basic smaller, and easy to get around
	Basically the low cost and smaller classes as well as teachers that actually care
	Basically the low cost compared to a university
	Be able to support my family
	Be more successful in life
	Because I can get an associates degree & go ahead & get my job & then move on to get my masters while working for a dental office. It was cheaper.
	Because I just needed the credits son.
	Because they offered a program I am interested in.
	Becoming a teacher, or cychatrst
	Besides cost & location > that's about it
	better my life w/ a good job so I can provide for my family
	better myself
	can afford tuition without loans
	can get a full degree here!
	change careers/ Do something I realy enjoy
	cheap

	cheap & close to home
	cheap and reasonable
	cheap cost
	cheap!
	cheaper for transfer credits to UofL
	Cheaper rate, help oin areas I need, one on one with teacher
	cheaper than 4-yr college
	cheaper than a university for obtaining the same degree - online classes are convient - allows me to work full-time & attend college
	cheaper than most universities
	Cheaper way to go before transferring to UofL.
	cheapest way to fulfill General Education requirement for Speed School
	cheerleading
	class time and close to home, job needs, pay
	classes are just more personal
	close - so I can live at home.
	close & offered classes I wanted to take
	close to home & cheap, prepares me for university
	close to home, and great school to attend
	Close to home, excellent school, 2 yr. programs.
	close to home, get basic class done with
	close to my home and affordable
	convenience, low price
	cost
	cost
	cost, close to home
	covered by GI bill
	covered them all
	create a better future
	credit transfer & close to home
	Day care problems
	Didn't want to go to a 4 year
	diverse population of students
	Doesn't have to do with parking, because you can never find a spot and have to pay $10 to park a day!
	easy parking & small, nice area
	ECTC gives me the impression I can reach the goals I have set for myself, to be the 1st in "my" family to graduate college. Low cost, live at home and education I need to advance in my career to inspire and help my family in the future.
	familiar faces
	family
	financial aid wasn't enough for UK
	for my major
	Friends

	Get a good GPA for baseball
	get a head start in college
	get to know how to interact w/ others
	getting 100% prepared for a 4-yr.
	Goal: How to stop worrying about "the bomb" (I hope you get the reference)
	good class size/ teacher
	Good location & staff
	good programs affordable & transferable.
	Good rep, cost, very affordable, convient
	good reputation
	gratefulness
	Great start after high school, if not really sure what you want to do
	growth & something I want to do career wise
	had a better rep. for nursing; want a good career
	had to start somewhere
	Has a great IT Program and is fairly close to home
	Having a child
	Hopefully transfer to a big college but undecided
	I am a single mom so it is improtant that is close to my home and work.
	I am able to attend & care for my daughters
	I am enrolled in JCC because I would like a better job and I need a college degree to get one.
	I came here because it is transitional and affordable I'm not the normal 20 yr. old who can go away to college
	I came to JCC straight out of high school to help me with the intimidation of "college"
	I can obtain both of my certificates here, and not attend another school
	I can work at my own pace, I have to work and take care of my kids, can't go full time
	I chose ECTC for the Ready to Work program as well as the curriculum
	I could not get into UofL with my ACT score
	I could work and go to school
	I decided to go to college at the end of the summer & it was too late to enroll in UK or UofL
	I go to ECC because I cannot afford UofL. I will transfer after next semester
	I had a child right after I graduated so that was the most convenient for me right now
	I have a goal of obtaining a bachelor's @ UK or Auburn
	I have always wanted to become a pediatrician
	I have been out of school for over 10 yrs and didn't want to jump back in to a huge classroom & get lost in the shuffle. I also needed to raise my GPA in order to get accepted into the education program.
	I have been out of school so long it seemed like the right place to start
	I just needed to get my shit together. I don't want to be a statistic
	I just want to succeed in life

	I knew it would help prepare me
	I live in Kentucky
	I love the small classes and it is very affordable
	I need more in life besides a high school diploma
	I need to make something of myself
	I never attended a university, but all my friends have paid more mone to go - none of them are currently enrolled - but I'm almost done. I believe that party scenes are a mistake at universitys
	I plan to graduate and go to Sullivan
	I think I'm more on a community college level than a university
	I transfer to a four year university
	I want a degree, however I do not need one.
	I want to become a nurse
	I want to beter my family
	I want to complete my education on a higher level
	I want to make a better life for me & my kids
	I want to obtain a nursing degree
	I wanted smaller class sizes
	I wanted to get core credit hours out of the way & pursue a higher education concerning personal interests afterward.
	I was financially strapped coming out of high school and I neede time to get them together
	I was sent here by UofL since nursing was full. I had never planned to come here
	I was undecided of where I wanted to attend college so I didn't want waste money going to a school I may not like.
	I'm a Metroversity student; I'm only taking 1 class here
	Increase GPA and amount of credit hours in preperation for transfer to UofL
	It cheaper than 4 year college
	it is cheap, and we have Ultra which means I can go to UofL
	It is not expensive that is a big reason. Please stop raising cost thanks
	It was a way for me to prepare for a four-year university
	it was cheap & convenient
	it was cheaper than a university and I could take my basic classes
	It was easier to keep a job while in school
	It was less expensive, small
	it was mainly the cost, very affordable
	It was more because it is cheaper
	Its small, and I know a lot of my friends came here
	It's was more affordable for me.
	ITT Tech too expensive
	I've seen what happens to people who stay in the town where I'm from
	JCTC has one of the highest rate of students successfully passing state nursing boards.
	job - personal growth

	job need
	job needs
	job needs
	job needs
	job needs
	just academics and low cost
	just cost & to transfer to UofL
	just failed Spanish and needed language credit for UofL
	Just to get me one step closer to my dream job.
	Knowledge is forever, labor breaks you down.
	last minute decision on where to go - you can apply the day before classes start and it doesn't matter
	Life needs
	Loss of job (laid off after 12 yrs), chance to move into a new career
	lost scholarship due to injury
	low cost
	low cost
	low cost & more options to look at & a good way to start out.
	Low cost for tuition, small class size
	Low cost, nursing program 2 yr.
	low grade pt. average
	Lower cost
	lower cost, ECTC offers WKU @ campus, closest to home.
	Machine program's outstanding teacher
	make a successful living and provide for my daughter
	make an example of myself for my kids
	Make more money, & feel good about myself
	maturity, responsibility
	Metro College from UPS
	money
	Money - I would rather pay for my clas than a football stadium
	money, money, money, and money
	Mostly cost, minimal requirements (SAT/ACT scores), increase GPA from HS
	mostly the low cost, and how close the campus was to my home in Taylorsville, KY
	My ACT wasn't good enough to go to a university, and I really want to go to college.
	my children inspired me. I hope that they follow my foosteps and complete college. Believer of "lead by example".
	my employer suggested I state to school. He says I have a knack for working with people with learning disabilities.
	My family future
	My high school GPA was too low for universities; my parents are funding me & told me to start at community college.
	My job closed down no work

	my mom was going to start here & took me with her one day & got me on my way to a career
	my mom, future, to be my own boss, love fashion
	my pregnancy in high school
	My sister
	My writing and math were below average
	Need a higher paying job
	no choice
	none listed
	not a big campus and has programs I desired
	nurs
	only a two yr degree, less rules than university
	only school in Louisville with real estate available
	other
	personal growth
	personal growth
	Personal growth
	Personal growth, complete core classes for transfer to obtain degree
	personal growth, environmental attention (prestige), future.
	personal growth, size of the college, cost, programs available
	Prepare for new career; low cost; looking for classes & programs where I can get a career after and be happy w/ job and financially stable
	price, location
	ready to return after a semester off
	recommendations from people in the career I want
	saving money
	Small campus, friendly people, low cost
	Small class size/ programs offered/ cost of tuition
	Small classes, affordable, able to obtain my degree
	small classes, affordable, close to home, all mornings, no Fridays
	small classrooms
	Small institute, close to home, gives me the sample of college life
	smaller class size
	smaller classes & financial problems
	smaller classes help me learn easier
	society
	Stable job in the future
	Start out small
	Teachers
	the ability to enroll & attend JCTC easily
	the aviation maintenance class they offered
	the cost of tuition
	The faculty is very helpful and I like the atmosphere.
	The main goal for my attending JCTC is because low cost and getting the minor classes for a associates degree out of the way

	The need for a convenient college to further my education and obtain a better career
	The teachers are very understanding
	the transferable credit hours
	They allow me to transfer my credits to a 4-year university (UofL)
	They are accredited & have program with UofL
	they had an art program
	They had classes I needed
	To avoid all the lower class BS you get at universities.
	To become a legal secretary
	to become a neonatal nurse, transferring to UofL after associates
	to better my GPA, and prepare for university, and convenient cost
	To complete a few semesters before transferring to UofL for lower cost of college in general
	to enhance my learning abilities before applying to a university
	To get a degree at an affordable cost to better support my kids
	to get a job doing what I enjoy
	To get away from this dead end place.
	to get into the nursing program and better my life
	to get my credits in a small environment
	to get ready for a university
	To get ready for bigger classes at a university
	to get straight As and transfer to an university
	to have a good education, good job that I enjoy
	To have a more financially stable future for me & my future family.
	to have a piece of paper
	To help me decide what career I want
	to help prepare for a career
	to improve children's future
	to prepare for a 4-yr university
	to start small coming from a small school & then go to UofL
	to take prerequisites for sonography program
	To transfer to a 4-yr university & then graduate
	to transfer to the University of Louisville
	transfer to 4-year school
	tuition
	tuition payable
	Ultra program
	ULTRA program for transfer
	undeciding
	UPS is paying for my school and this community college will get me started on the right track
	very personal, affordable, easy commute, great teachers!
	want a better paying job
	want to be able to have a better job

	want to go to UofL and Ultra helps
	Wanted to be close to home
	Wanted to stay at home and get a head start
	wasn't ready for a 4 year college yet
	With Ultra; all of my classes transfer to UofL
	worked out a good schedule since I have a young son
	you can work around your schedule
	You pretty much have to have a college degree to go anywhere so her I am
	zoo tech certificate

COMMUNITY & TECHNICAL COLLEGE STUDENT SURVEY

You are invited to participate in a research study by answering the attached survey about the impact of reverse transfer students on community colleges. (Reverse transfer students are community college students who have attended a four-year college or university.) The purpose of this study is to help community colleges to: (a) determine if the population of reverse transfer students is a significant group within the student population, (b) determine if the group is increasing in size, (c) highlight programs and policies that may be different for reverse transfers than for regular community college student groups, and (d) devise better measures for indicating that students have reached their educational goals. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will enhance the ability of the college to serve the needs of all the students and to obtain more funds to operate. Your completed survey will be stored in a secure location. The survey will take approximately 20 minutes to complete.

Taking part in this study is voluntary. By completing this survey you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to participate in this study you may stop taking part at any time.

Your participation is greatly appreciated. Thank you.

If you have any questions, concerns, or complaints about the research study, please contact: Joseph Petrosko, 502-852-0638, or Kathryn E. Lowrey, 502-419-8412 or kathy.lowrey@kctcs.edu.

COMMUNITY & TECHNICAL COLLEGE STUDENT SURVEY

The following questions are designed to provide information to the KCTCS administration about the needs of students enrolled in Kentucky's community and technical colleges. Please answer the following questions as accurately as possible by checking the appropriate blank unless otherwise indicated. Thank you for your time and cooperation.

PART 1: DEMOGRAPHICS

1. Gender	2. Ethnicity	3. Marital Status	4. How many dependent children do you have?	5. What is your date of birth?
_____ Male	_____ White	_____ Single (never married)	_____	___/_____
_____ Female	_____ African American	_____ Married		MM/YYYY
	_____ Asian			
	_____ Hispanic	_____ Divorced	What age(s)? ____ ____	
	_____ Native American	_____ Separated	____ ____ ____ ____	
	_____ Other	_____ Widowed	____ ____ ____ ____	

6. What is your current employment status?

___ Employed full-time ___ Unemployed

___ Employed part-time ___ Business owner

7. Do you have more than one paying job?

___ Yes ___ No

If yes, how many? (insert the number on each line)

___ Full-time ___Part-time

8. What is your household yearly income?

___ $9,999 or less ___ $50,000 - $59,999

___ $10,000 - $14,999 ___ $60,000 - $74,999

___ $15,000 - $19,999 ___ $75,000 - $99,999

___ $20,000 - $29,999 ___ $100,000 - $119,999

___ $30,000 - $39,999 ___ $120,000 or more

___ $40,000 - $49,999

Please continue on the next page.

PART II: EDUCATION HISTORY

9. When did you first enroll at a Kentucky community or technical college? Please specify the year, semester, and the specific community or technical college.

Year _____ Semester _____ Institution _____

10. Have you attended a school other than a state college or university (RETS, Louisville Tech, Sullivan, etc.)?

___ Yes ___ No

If yes, what school? _____ When? _____

11. Have you attended a four-year college or university before this semester?

___ Yes ___ No (if No, skip question #12 and proceed to #13)

12. When were you last enrolled in a four-year college or university?

Year _____ Semester _____ Institution _____

13. How many two-year and/or four-year institutions, not counting the institution in which you have enrolled for Fall 2008, did you attend before coming to your current KCTCS school?

Two year college(s) _____ Four year college(s) or university(s) _____

14. What credential(s) have you completed? (Please check all that apply.)

___ Certificate

___ College Diploma

___ Associate Degree (A.A., A.A.S., A.S.)

___ Baccalaureate degree (B.A., B.S.)

___ Master's degree (M.A., M.S., M.Ed., M.B.A.)

___ Doctorate (Ph.D., Ed.D.)

___ Professional degree (M.D., D.D.S., J.D.)

___ Other (please specify) _____

___ None

Please continue on the next page.

15. What is the highest educational level attained by your parents?

	Mother	Father
Less than High School Diploma	_____	_____
High School Diploma or GED	_____	_____
Some College, No Certificate or Degree	_____	_____
Vocational/Technical Certificate	_____	_____
Associate or Other 2-Year Degree	_____	_____
Bachelor's Degree	_____	_____
Master's/Doctoral/Professional Degree	_____	_____

16. How long did you wait after receiving your last credential before enrolling in a community or technical college? _____

17. How many credit hours are you taking during the Fall 2008 term? _____

18. How many credit hours have you completed at a Kentucky community or technical college?

_____

19. Have you ever taken college class(es) for credit on-line?

___ Yes ___ No If yes, how many credits did you earn? _____

20. Have you ever enrolled at more than one college for credit at the same time?

___ Yes ___ No

21. What is your approximate grade-point average for the credits you have completed at a Kentucky community or technical college? _____

22. What was your approximate grade-point average before you enrolled at your current community college? _____ _____ Does not apply.

23. Do you have a declared major at a Kentucky community or technical college?

___ Yes ___ No

If yes, please indicate your major. _____

Please continue on the next page.

24. If you do not have a declared major at a Kentucky community or technical college, do you plan to declare a major in the future?

___ Yes ___ No ___ Undecided at this time

If yes, please indicate the major. _____

25. What degree(s) or professional designation(s)/license(s) do you plan to complete in the future? (Please check all that apply.)

___ Certificate

___ Diploma

___ Two-year associate degree (A.A, A.A.S)

___ Baccalaureate degree (B.A., B.S.)

___ Master's degree (M.A., M.S., M.Ed., M.B.A.)

___ Doctorate (Ph.D., Ed.D.)

___ Professional degree (M.D., D.D.S., J.D.)

___ Other (please specify) _____

___ Have already completed highest degree planned

___ No plan to complete a certificate, diploma, or degree

26. How long do you plan to attend a Kentucky community or technical college?

___ One semester ___ Summers only

___ Two semesters ___ Undecided

___ Three semesters ___ Will be finished this semester

___ More than two academic years

27. Do you intend to graduate from a Kentucky community or technical college?

___ Yes ___ No ___ Uncertain

___ Already hold a credential from a Kentucky community or technical college

Please continue on the next page.

28. Are you planning to continue your education after attending a Kentucky community or technical college?

___ Yes ___ No ___ Uncertain

29. Do you plan to seek employment immediately after completing your program?

___ Yes ___ No

If yes, do you feel the Kentucky community or technical college prepared you for the workplace?

___ Yes ___ No ___ Uncertain

Please continue on the next page.

PART III: PARTICIPATION MOTIVATION

30. Reasons and goals for attending a community or technical college are shown below. For each reason listed, please indicate how important the reason is to you personally by circling the one number that reflects your personal opinion best.

	Not at all Important					Extremely Important
a. Prepare to transfer to a four-year college or university	1	2	3	4	5	6
b. Increase my self-confidence	1	2	3	4	5	6
c. Receive occupational instruction leading to employment upon graduation	1	2	3	4	5	6
d. Quality of instruction	1	2	3	4	5	6
e. Obtain training related to my current job	1	2	3	4	5	6
f. Update existing job skills	1	2	3	4	5	6
g. Improve my grade point average	1	2	3	4	5	6
h. Improve basic skills (reading, writing, mathematics)	1	2	3	4	5	6
i. Acquire skills for a career change	1	2	3	4	5	6
j. Learn about new technologies	1	2	3	4	5	6
k. Course(s) scheduled at convenient times	1	2	3	4	5	6
l. Course(s) scheduled at convenient locations	1	2	3	4	5	6
m. College is close to my home	1	2	3	4	5	6
n. College is close to my work	1	2	3	4	5	6
o. Minimal admission requirements	1	2	3	4	5	6

Please continue on the next page.

	Not at all Important					Extremely Important
p. Curiosity about the subject	1	2	3	4	5	6
q. Low cost	1	2	3	4	5	6
r. College has a good reputation	1	2	3	4	5	6
s. Complete an associate's degree	1	2	3	4	5	6
t. Complete courses to transfer to another institution	1	2	3	4	5	6
u. Complete courses for personal growth or interests	1	2	3	4	5	6
v. Prepare for career advancement	1	2	3	4	5	6
w. Upgrade skills or knowledge	1	2	3	4	5	6
x. Learn new skill(s)	1	2	3	4	5	6
y. Small class size	1	2	3	4	5	6
z. Faculty are approachable and friendly	1	2	3	4	5	6

31. What additional reasons or goals (personal growth, academics, job needs, other) influenced your decision to attend a Kentucky community or technical college? Please state.

_____

32. Do you think that you are meeting your goals at a Kentucky community or technical college?

___ Yes ___ No ___ Unable to judge

Please continue on the next page.

PART IV: INTENT TO COMPLETE A PROGRAM OF STUDY

33. Statements that indicate your intention to complete a certificate, diploma, or degree are shown below. For each statement listed, please indicate the one number that reflects your personal intention best.

	Strongly Disagree					Strongly Agree
a. I often think about quitting this program of study	1	2	3	4	5	6
b. It is likely that I will look for a new program of study to take next semester	1	2	3	4	5	6
c. I will probably look for a new program of study to take within the next year	1	2	3	4	5	6
d. It is not likely that I will enroll in another program of study.	1	2	3	4	5	6
e. It is likely I will complete this program of study	1	2	3	4	5	6

Please take a moment to check over the survey to make certain you have answered all the questions you wish to answer.

Thank you for participating in this survey

CURRICULUM VITAE

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DOB: Louisville, Kentucky - September 20, 1957

EDUCATION & TRAINING:

Ph.D. Education - Postsecondary Administration - ABD, University of Louisville

M.S. Biology - Aquatic Biology, University of Louisville, 1985 - Life History of *Notropis boops*, the Bigeye Shiner

Post-baccalaureate - Systems Science - Acid Rain Influences on Karst Geology

B.S. Zoology, University of Louisville, 1979

Kentucky Certified Nurseryman

PROFESSIONAL SOCIETIES:

Society of Conservation Biology
Ecological Society of America
Association of College and University Biology Educators
National Association of Biology Teachers

NATIONAL MEETING PRESENTATIONS:

1985 - Life History of *Notropis boops*: The Bigeye Shiner. International Fisheries Society, Port Aransas, TX - Poster presentation

INVITED PRESENTATIONS:

2003 - Turf and Landscape Management Short Course, Louisville, KY - Low Maintenance Landscapes

2003 – Fred Wiche Garden Expo, Louisville, KY – Gardening to Attract Wildlife

1993 - Kentucky Turf Council Short Course, Louisville, KY - Plants for Water Features

REFERENCES

Dr. Joseph Petrosko - Department of Leadership, Foundations, and Human Relations Education, University of Louisville, Louisville, KY

Dr. William Pearson - Department of Biology, University of Louisville, Louisville, KY

Dr. Thomas Reio – Florida International University, Miami, FL

Mr. Robert Silliman - Academic Dean - Jefferson Community & Technical College, 727 W. Chestnut, Louisville, KY 40203, 502-213-4294

Dr. Diane Calhoun-French - Provost - Jefferson Community & Technical College, 109 E. Broadway, Louisville, KY 40202 - 502-213-2621

Ms. Caroline Martinson – Natural Science & Mathematics Division Chair – Jefferson Community & Technical College, 109 E. Broadway, Louisville, KY 40202 – 502-213-5010